DOCUMENT RESUME

ED 195 701 CE 027 197

TITLE Training Guide for Foodservice Personnel in Programs for Young Children. A Manual for Nutritionists, Dietitians, and Foodservice Specialists Who Are Developing and Conducting Training Programs.
INSTITUTION Development Associates, Inc., Arlington, Va.
SPONS AGENCY Administration for Children, Youth, and Families (DHEW), Washington, D.C.
PUB DATE 79
CONTRACT HEW-105-77-1036
NOTE 207p.

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS Audiovisual Aids: *Child Development Centers: Citations (References): Competency Based Education: *Day Care: *Food Service Workers: *Foods Instruction: Learning Activities: *Nutrition Instruction: Preschool Children: Preschool Curriculum: *Training: Training Methods
IDENTIFIERS Department of Health Education and Welfare

ABSTRACT

This manual is a competency-based curriculum planning guide for nutritionists, dietitians, and foodservice specialists to use in conducting preservice and inservice training programs for foodservice personnel in Head Start, day care, and other preschool programs. After an introductory chapter, which states the purpose of the manual, defines instructor qualifications, describes the typical trainee and the type of program in which the trainee works, and suggests how to use the manual, the main body of the manual is divided into two sections. Section 1, The Foundation Competencies, applies to all aspects of organizing a foodservice to serve young children, and includes three competencies: nutrition and feeding of young children: job management: and sanitation and safety. Section 2, The Technical Competencies, discusses each step in carrying out a quantity foodservice, and includes four competencies: menu planning: food purchasing: food receiving and storage: and quantity food production. Each of the two main sections includes the following information: overview of competency applications: orientation to the unit: lists of booklets and learning aids, audiovisual materials, references, and competencies and sub-competencies included in each unit: instructions and activities: behavioral assessment: and handouts. Appendixes include forms for managing and assessing the training, references and addresses, and nutrition education resources. (KC)

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Training Guide for Foodservice Personnel in Programs for Young Children

A MANUAL FOR NUTRITIONISTS, DIETITIANS, AND FOODSERVICE SPECIALISTS WHO ARE DEVELOPING AND CONDUCTING TRAINING PROGRAMS

CE 027 197

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Human Development Services
Administration for Children, Youth and Families
Head Start Bureau
Washington, D.C. 20013
1979

ACKNOWLEDGEMENTS

During the development of this Training Guide, Development Associates, Inc., worked closely with Dr. Margaret Phillips, Nutrition Specialist, Administration for Children, Youth and Families, Office of Human Development Services, DHEW. Her support throughout the project contributed greatly to its success.

Appreciation is extended to the Head Start Directors and their foodservice staff who participated in the pilot test of the training materials and to the Regional Office staff, ACYF, who assisted in the selection of pilot programs.

Nutritionists who conducted the pilot study provided invaluable assistance in the final product. The assistance of all who provided advice is gratefully acknowledged.

Mabel K. Sterling, PhD.
Project Director
Development Associates, Inc.

FOREWORD

The goals of the nutrition component of Head Start are to provide food in a safe, sanitary manner to help meet the child's daily nutritional needs, and to provide nutrition education for staff, parents, and children in order that children may develop sound food habits and enjoy food and meal times. This manual was created to help programs meet these goals through providing a basis to conduct ongoing training for foodservice staff members.

A series of foodservice competencies essential to the delivery of a high quality foodservice program were developed as the foundation for the Training Guide. These competencies are an outgrowth of recommendations made by a National Task Force appointed by the Administration for Children, Youth and Families, which included nutrition personnel from local Head Start programs. Each of the seven competency areas describes learning activities, resource materials for the instructor and student, and assessment criteria.

The Training Guide was reviewed by nutrition personnel in local Head Start programs and several bureaus in the Department of Health, Education, and Welfare, and by representatives of the U.S. Department of Agriculture who are concerned with foodservice.

Nutritionists, dietitians, and foodservice specialists will find this manual invaluable in conducting pre-service, and in-service training programs for foodservice personnel in Head Start, day care, and other preschool programs.

Users of the Guide are encouraged to contribute their ideas for further development to: Margaret G. Phillips, Ed.D.; R.D., Nutrition Specialist, Head Start Bureau, Administration for Children, Youth and Families, Office of Human Development Services, P.O. Box 1182, Washington, D.C. 20013.

Blandina Cardenas Ramirez
Commissioner, Administration for
Children, Youth and Families

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TO THE INSTRUCTOR

Purpose of the Manual

This manual was designed to be used in training foodservice workers whose primary responsibility is the daily feeding of young children in child care programs. The training units were developed around the foodservice competencies established by the Administration for Children, Youth and Families (ACYF), Office of Human Development Services (OHDS), U. S. Department of Health, Education and Welfare (DHEW), for foodservice staff in Head Start and Day Care programs. Each competency area includes the complete set of competencies for all foodservice positions in that particular cluster of knowledge, attitudes and behavior. For training purposes, each competency was developed into a set of sub-competencies, and, in turn, a set of assessment statements which indicate behaviors the Trainee should exhibit after training.

The manual is intended as a curriculum planning guide for in-service training of foodservice staff in Head Start/Day Care and other comprehensive child development programs. The Instructor is encouraged to select from, and adapt the materials to meet the needs of the specific program and Trainee(s).

Organization of the Manual

The manual has been designed to provide easy access to the information required to conduct training. This chapter, To The Instructor, is an introduction to the manual and states its purpose, defines the qualifications of the Instructor, describes the typical Trainee and the type of program in which the Trainee works, and suggests the steps that the Instructor should take in using the manual.

The main body of the manual is divided into two sections:

- Section One, The Foundation Competencies, devoted to programmatic essentials which apply to all aspects of organizing a foodservice to serve young children; and

- Section Two, The Technical Competencies, where each step in carrying out a quantity foodservice is discussed.

The Appendix to the manual contains three sections:

- Appendix A, "Forms and Instructions," includes management and assessment forms for the Instructor's use in planning and conducting the training.

- Appendix B, "References," gives complete bibliographic citations for all the publications and audiovisual materials which are referred to throughout the manual. In addition, addresses are given for government and industry sources of materials which can be borrowed or rented or which can be obtained free or at low cost. Appendix C references nutrition education resources.

Each of the two main sections of the manual is organized in the same manner to include the following types of information:

- Introduction
  - Overview of the competencies as they apply in different program settings.
- Competency Area Units (three units in Section One, four in Section Two)
  - An orientation to the unit.
  - A list of suggested program booklets and other learning aids to be made available to each Trainee.
  - A list of audiovisual materials.
  - A list of references for the Instructor.
  - A list of the competencies and sub-competencies included in the unit.
  - For each sub-competency, a series of Instructions. These are activities stated in terms of the general instruction for the activity. Specific examples are given where clarification may be needed, and suggested learning aids are noted.
  - For each Instruction, an Assessment stating the behavior expected of the Trainee who successfully follows the Instruction after one or more trials.
  - A set of handouts which can be duplicated for Trainees.

The Instructor

The Instructor is an individual who is qualified to provide professional nutrition direction or consultation to Head Start programs, as stated in Head Start guidance material[*]: "A qualified nutritionist is one who meets the educational and training requirements for membership in The American Dietetic Association plus one year of experience in community nutrition including services to children 0-6 or one who has a baccalaureate degree with a major in foods and nutrition, dietetics or equivalent hours of food and nutrition course work plus two years of experience in community nutrition including services to children 0-6. The required experience could have been concurrent with or a part of the training." Knowledge and experience with the federal program(s) under which the Trainees' child care center(s) operate is highly desirable, also. The nutritionist/dietitian may serve as the Instructor throughout, or oversee the training conducted by the employee's supervisor. At a minimum, the nutritionist/dietitian should plan the training with the Instructor after a pre-assessment, and observe and assess the Trainee's performance on each competency after training is completed.

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[*] Handbook for Local Head Start Nutrition Specialists. Administration for Children, Youth and Families, Office of Human Development Services, HEW, Washington, D.C., p. 39.

Although this training manual may be used profitably as program guidance, it should not be used to set up a training program without a qualified Instructor. The attainment of each competency depends upon the Trainee's ability to repeat correctly a skill which has been demonstrated properly. The Instructor must be able to demonstrate skills correctly, answer Trainees' questions with accurate information, and be qualified to judge correct Trainee performance.

Foodservice Personnel to be Trained

Many cook/managers, cooks, and cook/aides working in child care programs have had considerable training and experience in paid foodservice positions. Other personnel were recruited from the parent group or the neighborhood because of their experience in cooking for large families. They are dedicated to meeting the needs of children and they like to cook.

The Instructor will find that many of the Trainees are already proficient in some of the foodservice competencies. Some may easily achieve a satisfactory performance level in all of the competencies through the type of instruction suggested in this manual. However, some Trainees may function with difficulty in the tasks involving reading, problem solving, computation, and writing. Research by the U. S. Office of Education has revealed that one out of five American adults lacks basic skills and knowledge in these areas.* In planning to conduct training in the full set of foodservice competencies, the Instructor should encourage the Program Director to arrange for those needing help to receive training in functional literacy skills either before or during foodservice training. Guidance in the selection of an adult education program for functional competencies may be obtained from the local high school or the central office of the local school district.

Foodservice Systems for Child Development Centers

There are many types of foodservice operations among child care programs. Food is prepared on site in most child care centers. Where individual centers do not have satisfactory facilities for food preparation, a central kitchen may be used to prepare and distribute meals for several centers. In some cases, kitchens are shared with other programs operating in the same building.

Some programs use a catering service for all or some of their meals and thus would not have staff needing all of the foodservice competencies. However, Unit II, Sanitation and Safety, and Unit IV, Menu Planning, will be useful for training staff and volunteers who plan, serve, or monitor catered meals. No matter what type of foodservice operation a program may have, and regardless of the size of the program there are staff who will need foodservice training.

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* Education Briefing Paper, "Adult Education." U. S. Office of Education, November 1976, unpublished.

The entire foodservice operation may serve a few children or several hundred at one or more sites. Sites may be near each other or scattered over several counties. Thus, the staffing patterns and the procedures for planning meals and for purchasing, storing, preparing, and serving food vary considerably from program to program.

Management may be under the direction of a staff Nutritionist/Dietitian, Head Cook or Foodservice Manager, Program Director, or another staff person who has additional administrative responsibilities.

Criteria for the types of meals and meal services for Head Start programs are provided in the Head Start Performance Standards.* Many nonprofit child development programs serving young children, part-day or full-day, are eligible for, and participate in the Child Care Food Program (CCFP) administered by the Food and Nutrition Service of the United States Department of Agriculture (FNS/USDA), and must therefore meet the meal patterns and other requirements of CCFP. Likewise, all preschool programs must meet state and local requirements. The foodservice competencies are designed to provide a quality foodservice program, to meet objectives of the Nutrition Component, and to conform to accepted practices in nutrition services for children. However, federal, state, and local regulations for foodservice in child care programs are changed from time to time. The Instructor should become familiar with current regulations and standards governing the individual programs whose workers are in training.

Steps in Using the Manual

This Instructor's Manual was designed as a curriculum guide and as such allows considerable flexibility in its use. The Instructor is encouraged to develop the approach best suited to the situation and needs of the individuals being trained. Listed below are some suggested procedures for using the manual.

STEP 1 - Review the Instructor's Manual

For each of the two sections of the manual, read through the introductory chapter. Then, for each of the competency areas which follow, review the competencies, the list of training aids and references, the series of instructions and assessments, and the suggested handouts for Trainees.

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*Head Start Performance Standards. Administration for Children, Youth and Families, Office of Human Development Services, HEW, Washington, D.C.

Look through the Appendix in the back of the manual to familiarize yourself with the forms which were designed to be used in reviewing and selecting training materials and in assessing training needs.

STEP 2 - Prepare for the Pre-Assessment

Before training begins, it is important to select the competencies in which instruction will be given. In the selection of competencies for training, priority should be given to those essential for Trainees in their present positions, and next to those which Trainees could use on the job after training. The form for Assessment of Foodservice Competencies in the Appendix, page 174, is designed to be completed for each Trainee by his or her immediate supervisor. When completed, the form will show the supervisor's selection of competencies relevant to the Trainee's job and those related to other tasks to which the foodservice worker might be assigned after training. It will also show the supervisor's rating of the Trainee's aptitude for, and level of proficiency in each competency. Read over the form and the instructions for using it. Decide if the sample form is appropriate or if an entirely different form or another method of obtaining the supervisor's assessment of training needs should be used.

Plan for an initial self-assessment by the foodservice workers of their training needs. Schedule an informal discussion meeting to conduct the assessment and to provide the foodservice workers with a general orientation to the scope of the competencies. Review the Trainee Self-Assessment Form in the Appendix, page 175, and decide how you will use it to record the self-assessments, or design another type of record.

STEP 3 - Conduct the Pre-Assessment

Once the pre-assessment plan has been developed, the assessment can be conducted. If the form for Assessment of Foodservice Competencies presented in this manual is to be used for the supervisor's assessment, discuss each assessment with the supervisor and use the form to record the supervisor's responses. Although the supervisor may be an administrator with little knowledge of the technical aspects of the foodservice operation, the supervisor's perception of the Trainee's skills and aptitudes is an important piece of information for the Instructor. The initial Trainee self-assessment should be conducted as part of a general orientation to the competencies. Its purpose is to find out how Trainees describe their jobs, and what they think is expected of them. Later, as the training program progresses, the Instructor will find out how much each Trainee knows about specific tasks. Record the self-assessment on the Self-Assessment Form in the Appendix.

If possible, observe Trainees on their jobs to conduct your own pre-assessment. Take notes or make a checklist to help refresh your memory as you compare your pre-assessment with those of the supervisor and the Trainee.

STEP 4 - Prepare a Training Plan

To plan a series of lessons for a group of foodservice workers, or to design an ongoing program for one person to be trained on the job, review the pre-assessments made by each worker and supervisor and compare them with your own. Determine the content and level of presentation. Then begin outlining a training plan using the suggestions for instructions and assessments in each competency area, companion handouts and learning aids, and the Instructor's references. In reviewing new films or printed matter for use in the training program, use the review forms as instructed in the Appendix, page 180.

If the assessment shows that a potential Trainee reads with difficulty or seems to be functioning at a low level in writing, computation, or problem solving, the plan for that Trainee should be adjusted in scope and approach. Training in functional literacy/competency skills, before or during foodservice training, might be arranged through the employee's supervisor and an appropriate adult education program.

The completed training plan should include competencies to be covered, the order in which instruction will be given, facility and materials needed, and a training schedule.

STEP 5 - Review the Training Plan with the Trainee and the Trainee's Supervisor

Review the training plan with each Trainee or group of Trainees and their supervisors. This will provide an opportunity to make any necessary adjustment in the content and scheduling. It will also provide an opportunity to gear the learning experiences to planned events in the job situation, e.g., food deliveries, field trips, etc. Arrangements should be made at this time to secure all training materials.

STEP 6 - Make Necessary Revisions in the Training Plan

Following the review session, the training plan should be revised and finalized. Copies may be sent to the Trainee and the supervisor with a notation that further modifications may be made in the plan during the training period if this appears warranted.

STEP 7 - Conduct the Training

The approach to training in job-related skills that has been found most successful in the foodservice industry is the job instructional training method which is based on individualized instruction. In this method, the Instructor demonstrates the skill, asks the Trainee to demonstrate and explain, and corrects the Trainee if necessary. The method may be adapted for training a small group of eight or less individuals. For larger groups, an assistant Trainer or an advanced Trainee should assist in observing and correcting each Trainee after the demonstration by the Instructor.

Supplement or reinforce the demonstrations with audiovisual training aids, discussions, and followup laboratory or on-the-job experiences. Limit the reading assignments to practice in looking up facts from easy-to-use resource materials such as the government publications referenced in this manual. Use the handouts to provide information which is not readily available from other sources, and read them aloud with the Trainees. The exhibit on the following page details the instructions for using this method.

JOB INSTRUCTIONAL TRAINING

Preparation is as Important as Instruction

- Have a Plan.
  How much skill do you expect? How soon?
- Analyze the Job.
  List the principle steps.
  Pick out the key points.
- Have everything ready.
  Tools, equipment, material.
- Have the work properly arranged just as the worker will be expected to keep it.

The Actual Instruction Proceeds by Four Steps

- Prepare the Learner.
  Put the Trainee at ease.
  Find out what he/she alread knows.
  Get him/her interested and eager to learn.
- Demonstrate the Operation.
  Tell, show, illustrate, and question carefully and patiently.
  Stress the key points, safety factors.
  Instruct clearly and completely, one point at a time.
  Check, question, and repeat.
- Application in Try Out.
  Have the Trainee tell and show you how the operation is performed.
  Have the Trainee explain key points.
  Observe performance and correct errors.
  Repeat instructions if necessary.
- Followup.
  Have the Trainee work on his/her own but tell him/her where to get help.
  Encourage questions, check frequently.
  Get him/her to look for new points.
  Taper off watching as the Trainee progresses.

STEP 8 - Conducting a Formative Evaluation

A formative evaluation is an ongoing evaluation which feeds back into the training system so that appropriate adjustements can be made throughout the training. This type of evaluation often takes place in training programs in a very unstructured way when Instructors continually assess progress and make adjustements accordingly. However, a more structured, formative evaluation can be done for each competency area by using the Unit Evaluation Form in the Appendix, page 176.

STEP 9 - Recording Trainee Progress

The list of sub-competencies selected for the training program and the related assessment statements indicating successful performance can be entered onto a checklist to record the progress of individual Trainees. The Instructor may wish to add or omit some of the instructions and repeat others so that each Trainee can proceed at his own pace. The checklist could include space to indicate the number of trials or repetitions and the date of each assessment if training is to be conducted over a long period of time.

STEP 10 - Report to the Sponsoring Agency

The Instructor may want to give each agency a written report discussing the level of performance of each Trainee in the various competency areas and making suggestions for further training.

SECTION ONE

THE FOUNDATION COMPETENCIES

SECTION ONE

THE FOUNDATION COMPETENCIES

The Foundation Competencies are those which underlie all of the tasks performed by all foodservice workers in programs for young children. Proficiency in these competencies is essential for all foodservice personnel no matter what their position. They are classified into three competency areas as follows:

I - Nutrition and Feeding of Young Children

II - Job Management

III - Sanitation and Safety

The Essential Nature of the Foundation Competencies

Foodservice personnel working in preschool and day care programs are responsible for planning and preparing meals and snacks which meet a substantial portion of the children's nutritional needs. They are also responsible for serving meals which promote the acceptance of good food. So it is essential that foodservice personnel have an understanding of nutrition, especially as it relates to children. They also need to know about children -- their likes as well as their need for emotional and social support.

In addition, all cooks as well as managers must know the objectives and requirements for nutrition services so that they understand how and why the principles of nutrition and child development apply to their own behavior in the program. Proficiency in all of the competencies in Area I, Nutrition and Feeding of Young Children, is an essential foundation for the development and purposeful use of the other foodservice competencies.

Competency Area II, Job Management, is concerned with the management attitude as well as with skills in using management tools. Training should be oriented toward helping Trainees realize their management potential, whatever their position. In carrying out their duties, all foodservice workers must be managers of their own time and energy and must coordinate their work with that of other people. One person must manage the whole foodservice operation, and in doing so, may direct the work of others. In a small center where one person plans menus, orders and prepares food, and administers the kitchen's financial affairs, that person must manage to accomplish all tasks on a timely basis. Planning, organizing, and controlling a large foodservice operation is different only to the extent that the time and energy of several persons is available, and often duties can be specialized.

Regardless of the type and size of the operation, each foodservice worker must manage time, energy and materials and work effectively with other people.

Competency Area III, Sanitation and Safety, deals with life and death matters. If good food is not handled and stored properly, it will become unsafe to eat. Illness and even death of children and staff eating meals at the child development center can result from ignorance or carelessness on the part of the persons preparing their food or the persons responsible for the upkeep of the food preparation and storage areas. In addition, ignorance of the principles of safety or carelessness in applying the principles can cause accidents. All personnel should know how to protect themselves and others from injury and should be helped to develop an attitude of working safely. Anyone having anything to do with the foodservice operation must be instructed in the fundamentals of sanitation and safety -- this instruction should begin before or immediately upon employment, and should be repeated periodically. This competency area is truly a foundation to all of the activities in which the foodservice worker participates.

Training in the Foundation Competencies

The competencies in the three foundation areas are intended to produce long-range results in improving overall job performance. For example, a cook without a knowledge of nutrition can usually plan adequate meals by following the prescribed meal pattern. She is more likely to make errors in following the pattern, however, if she is not familiar with nutrient content when selecting foods. And, in the long run, she can, while staying within the meal pattern, plan more acceptable and nutritious menus if she knows the food sources of essential nutrients and if she knows what kinds of foods children like.

The long-run effects which training in the foundation competencies is designed to produce are difficult to measure. It is difficult for an individual to attribute anything that happens on the job to the fact that he did or did not exercise one of the Foundation Competencies. He may know his assigned tasks with or without a written job description. Self-reinforcement on the job, therefore, tends to be weak. Interaction with others who can provide positive, analytical feedback is helpful in maintaining these competencies. Small group training is ideally suited to this purpose. A demonstration in front of a group can be discussed and replayed in terms of different situations on the job. Feelings can be shared and indepth understandings developed through guided interaction with others.

Organization of the Competency Area Units in Section One

The Competency Area Units which follow are:

I - Nutrition and Feeding of Young Children

II - Job Management

III - Sanitation and Safety

Each of the Competency Area Units contain several types of information:

- Introduction;
- Resource List for the Trainee and for the Instructor;
- List of competencies and their related sub-competencies;
- Instructions and assessment for training in each sub-competency; and
- Handouts which can be duplicated for Trainees.

The competencies and sub-competencies, instructions, and assessments in each area unit are logically related to each other and represent a complete set of competencies in the subject area relevant to foodservice workers. The introduction and handouts supporting the instructions in each unit are not comprehensive because this material is meant to be supplemental to the existing learning aids and resource material which is described in the unit. Since the availability of suitable materials for each unit varies, the scope and approach of the introductions and handouts varies also.

COMPETENCY AREA I - NUTRITION AND FEEDING OF YOUNG CHILDREN

Foodservice personnel, to be effective, should have knowledge of basic nutrition principles related to young children and an understanding of children's needs. The guidance portion of the Head Start Performance Standards for Nutrition provides advice to staff in helping children to develop sound dietary habits. These principles should be incorporated into the overall planning and implementation of the foodservice program

An overview suggesting the scope of the information base needed by all foodservice personnel in Nutrition and Feeding of Young Children, is presented in the following paragraphs. The Instructor may wish to go into more detail with advanced Trainees or those carrying the responsibility for menu planning.

Nutrition for the Young Child

Preschool children require the same nutrients as other children in different amounts, depending on their individual activity levels and growth needs. The growth rate of preschoolers drops dramatically from the rapid rate of growth experienced during infancy. About one-half of the total weight gain goes to muscle development. Large amounts of minerals are deposited in bones. The bones grow stronger to keep pace with muscle development and the child's increased activity.

An adequate intake of fluids is also essential. Young children require relatively more water in their diet than older children because their tissues contain more water and because the body surface through which water can evaporate is larger relative to their body mass. Milk and fruit juices have a high water content and can provide a substantial part of the water needed.

Major nutrients required by all children are carbohydrates, protein, fat, vitamins and minerals. Recommended allowances for calories, protein, vitamin A, the B vitamins, and ascorbic acid gradually increase during the preschool period. Particular attention should be given to the following nutrients, bearing in mind that each child has individual differences and needs.

Calories: Calorie needs of a preschooler may range between 1,000 and 1,500 calories per day depending on activity levels. Carbohydrates, protein and fats provide calories.

Carbohydrates: Carbohydrates are an efficient source of energy to the body. Sugar which is refined from sugar cane or sugar beets, the sugar naturally found in fruits, and the starches found in whole grain breads and cereals and vegetables provide carbohydrates. Emphasis should be on serving whole grain or enriched breads and cereals, fruits, and vegetables as the chief source of carbohydrate in the child's diet. By eating these foods, the child receives the benefit of other nutrients as well. On the other hand, candy, cake and other foods containing refined sugar as a principal ingredient are the carbohydrate sources which provide calories, but are deficient in other nutrients.

Protein: The recommended daily protein allowance for young children should be provided to maintain a healthy pattern of growth and development. Check the RDA* for the age of the child. Some of the allowance should be from high quality protein such as milk, cheese, eggs, fish, poultry or meat. This will insure adequate amounts and kinds of amino acids needed to build new tissues, especially muscles. Other sources of protein include dried beans and peas, legumes, nuts and peanut butter.

Calcium: This mineral, as well as phosphorus and fluoride, strengthens bones and teeth. It also plays a role in blood clotting. Food sources are milk, cheese, yogurt, green leafy vegetables and legumes.

Vitamin A: This vitamin increases resistance to infection, helps prevent night blindness and promotes optimum growth. Some excellent food sources include liver, green leafty vegetables, sweet potatoes, yellow squash and carrots.

Iron: This mineral helps to form hemoglobin, a part of blood which carries oxygen to body tissues. The recommended allowance for 3 year olds is greater than for 4 to 6 year olds. Good sources include liver and lean red meats, dried beans and peas, soybeans, enriched and whole grain breads and cereals, and dark green leafy vegetables.

Ascorbic Acid (Vitamin C): This vitamin is essential to the formation of supporting tissues, particularly the capillaries. Good sources need to be included in the daily diet. Examples are oranges, grapefruit, strawberries, tomatoes, broccoli, cabbage, and dark green leafy vegetables.

Feeding the Child with Special Needs

Developmentally disabled children are nutritionally vulnerable because of a variety of problems concerning food and nutrient intake. These children require the same nutrients as other children, however, some special measures may be necessary. There may be a need to modify the texture of food for children who have difficulty chewing or swallowing. Energy intakes need to be monitored, and appropriate foods provided to meet individual calorie and nutrient needs among children with low physical activity levels who tend to gain weight. Similar precautions are needed with extremely active children who may be lean for their height. Modified diets may be necessary for diseases such as diabetes and allergies.

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*Recommended Dietary Allowances, National Research Council

Once the child's problems are identified and a nutrition care plan established, foodservice personnel play an important role in the implementation of the nutritional care. They need to be aware of the child's special needs as well as modifications to be made in the child's diet. Training foodservice personnel in the preparation of special diets is essential. Communication is extremely important between the staff and the child's family as to the acceptance of the diet, modification and progression of the diet. Specially designed utensils and furniture may be purchased or hand-crafted for use in helping children develop self-feeding skills.

Overweight

Overeating is the major cause of overweight. However, the amount of food that is barely adequate for one child may represent overeating for another. An inactive child whose energy needs are easily met is more likely to eat more than he needs than a more active child. Center staff and parents should recognize that a good eater is not a big eater but a moderate eater. The amount of food available should not be considered the amount which should be consumed. Children whose weight is excessive for their height or who suddenly begin to gain weight should be helped to relax and slow down at mealtime, and should be checked by the physician for any contributing health problems. The nutritionist can help the staff and the child's family establish the emotional climate as well as the dietary pattern that an overweight child needs in order to develop moderate eating habits.

Preparation and Serving of Children's Meals

In preparing and serving food for preschoolers, it is important to have an understanding of children's food preferences and behavior patterns that affect food choice. By participating in the serving of meals, and observing the children at mealtime, foodservice personnel can find out more about how the children like the menu. They can see if any of the children have trouble handling or chewing some of the menu items, and how the children react to new foods. This also allows them to interact with children, parents and other staff members to find out what each child likes and what he eats at home.

Palatability of foods depends on flavor, appearance, color, texture, consistency and temperature. Children generally like crisp raw vegetables, that they can pick up. Strings on celery or green beans may be difficult to manage, therefore, care must be taken in preparing these foods.

Consistency of the food is important to consider. Foods that are too dry are not well liked. Dry or gummy mashed potatoes will not be appealing to children, and they may experience difficulty in eating them. Fluffy mashed potatoes are, on the other hand, liked by most children.

The temperature of food is important to preschoolers. They do not like foods too hot or too cold.

Children have a keener sense of taste and smell than adults do. Therefore, they may not readily accept foods with strong flavors or foods that are highly seasoned. Bland foods served to preschool children are more readily accepted. They also prefer single foods to combination dishes so that identity and flavors are not intermingled. For children, recipes should be adjusted to contain a minimal amount of seasoning and to remove salt.

Serving sizes must also be considered. Children are encouraged to serve themselves the amounts that they feel that can eat. Too much food on a plate may be overwhelming and the child may not want to eat at all. Appetites vary. They should not be forced to overeat. Food should not be used as a reward or punishment.

Introducing new foods to children requires careful planning. A new food should not be thrust on the child without his being prepared for the experience. If the child learns about a new food, for example, its name, what it looks like, where it comes from and what it can do, the groundwork has been laid for its acceptance. This is one step toward the development of good food habits.

Children are more likely to be willing to try a new food if they feel secure and are guided by adults. Adults provide role models for children to follow. Keep in mind that preschool children enjoy exerting their independence which may result in unwillingness to try new foods, refusal to eat, dawdling and playing with food, and food jags.

Children learn by doing. Providing food experiences which directly involve the children in activities like making applesauce will help curious preschoolers to try new food.

The times when food is served should be a relaxed and quiet time. The dining area should be as attractive as possible and the atmosphere should be undisturbed and pleasant.

Children should be seated in child-size chairs at small tables of five to six persons including adults. Meals should be unrushed and children encouraged to serve themselves. Dishes and utensils used should be appropriate for preschoolers. For example, 4 or 6 oz. juice glasses are easier for children to hold than 12 oz. tumblers. Use small pitchers so that children can learn to pour their own juice or milk.

Some local authorities do not permit programs to use the type of service which allows children to serve themselves. In this case, host or hostess service at the table, with a seated adult serving each child's plate is preferable to preplated meals. Work with your Health Department, the agency administering the Child Care Food Program, and any other local agencies which regulate your foodservice program to develop the plan which fosters optimum opportunity for learning.

Nutrition education activities should be provided for all staff and parents, and should be included in the children's activities once a week or more frequently. Foodservice personnel should be included in the planning as well as the implementation of the nutrition education program, and can contribute their knowledge as well as learn more about nutrition and the feeding of young children.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for Trainees

USDA/FNS A Planning Guide for Food Service in Child Care Centers (10)

HEW/OHDS Head Start Performance Standards (5)

Visual Aids

Film: Jenny Is a Good Thing (40)

Transparencies: Four Food Group Transparencies (38)

Books

Bogert, J. and D. Calloway, Nutrition and Physical Fitness (61)

Fleck, H., Introduction to Nutrition (62)

Guthrie, H., Introductory Nutrition (63)

Lowenberg, M., et al., Food and Man (70)

Martin, E. and A. Coolidge, Nutrition in Action (71)

U.S. Government Publications

HEW/OHDS Handbook for Local Head Start Nutriton Specialists (1)

HEW/PHS/HSA Nutrition and Feeding of Infants and Children under Three in Group Day Care (7)

HEW/OHDS Granger, R.H., Your Child from One to Six (8)

USDA/FNS Child Care Food Program Regulations (12)

COMPETENCY AREA I - NUTRITION AND FEEDING OF YOUNG CHILDREN

COMPETENCY I A: Identifies the nutritional needs of children and relates positively to these needs.

1. Describes the nutritional needs of young children in general terms.
2. States the conditions at mealtime which help young children develop good eating habits, and demonstrates this knowledge in behavior when eating with the children.
3. Compares a daily food record with a daily food guide, identifies the key nutrients provided by each of these sources, and describes what each class of nutrients does for children.

COMPETENCY I B: Incorporates the program objectives and follows program guidelines in planning and working on the job.

1. Identifies nutrition program objectives and guidelines.
2. Plans own activities in relationship to nutrition program objectives and guidelines.

COMPETENCY I A

IDENTIFIES THE NUTRITIONAL NEEDS OF CHILDREN AND RELATES POSITIVELY TO THESE NEEDS

A1: Describes Nutritional Needs of Preschool Children in General Terms

	Instruction		Assessment
1.1	Listen to Instructor's presentation on the basic principles of nutrition, including how nutrition affects health, energy, and physical growth; dietary patterns and individual food habits, Ask questions and then tell the main points in your own words.	1.1	Describes in general terms the body's nutritional needs for health, energy and physical growth; the formation of dietary patterns and individual food habits.
1.2	Discuss the nutrition requirements of preschool children, especially the importance of nutrients in promoting proper growth and development for children ages one through six.	1.2	Answers questions on the importance of nutrition in the growth and development of the child.
1.3	With the Instructor, list the needs of the handicapped child and the child on a special diet. Tell how you can help meet the needs.	1.3	Is aware of children who are handicapped and makes a special effort to get to know and understand them.

A2: States the Conditions at Mealtime Which Help the Children Develop Good Eating Habits, and Demonstrates This Knowledge in Behavior When Eating With the Children

	Instruction		Assessment
2.1	Participate in role playing several activities relating to children before, during and after mealtime. Evaluate the role play.	2.1	Demonstrates a general understanding of the need for a calm atmosphere around mealtime.
2.2	Discuss cultural food patterns and how they affect the preschooler's social well-being.	2.2	Demonstrates an understanding of the importance of cultural factors in the selection of foods and in interaction with the children.

Instruction	Assessment
2.3 Discuss the eating habits and food preferences of several children observed at your center, and the food-service worker's role in helping these children develop good food habits.	2.3 Recognizes the eating habits and food preferences of individual children and takes appropriate action.
2.4 Have a meal with the children, converse with them, and observe their eating habits.	2.4 When eating with children, carries on conversations with children and encourages children to eat or taste different foods but never tries to force them.

A3: Assesses Daily Food Record with a Daily Food Guide, Identifies the Key Nutrients Provided by Each Group of Foods, and Describes What Each Class of Nutrients Does for Children

Instruction	Assessment
3.1 Using Daily Food Guides and food models, name classes of nutrients, their food sources, and function in the body.	3.1 Names categories of foods in the Daily Food Guide, the major nutrients each group provides, and the function of those nutrients in the body.
3.2 Evaluate own food intake recall in terms of Daily Food Guides (Handouts Ia, 24-Hour Recall; and Ib, Meal Analysis).	3.2 Classifies menu items according to the categories of foods in the Daily Food Guide.

COMPETENCY I B

INCORPORATES THE PROGRAM OBJECTIVES AND FOLLOWS PROGRAM GUIDELINES IN PLANNING AND WORKING ON THE JOB

B1: Identifies Nutrition Program Objectives and Guidelines

Instruction	Assessment
1.1 Review nutrition performance standards, objectives, and guidelines of Head Start/Day Care. (See Head Start Performance Standards).	1.1 Identifies objectives, standards and guidelines of the nutrition program.
1.2 Study the required Child Care Food Patterns for preschool children. (Handout I3, Child Care Food Program Meal Patterns).	1.2 Describes the CCFP meal patterns of breakfast, lunch/supper, and supplements.
1.3 Study scheduling requirements for meals and design a schedule of meals/snacks for a part-day and a full-day program.	1.3 Designs a schedule of meals/snacks for a part-day and a full-day program.

B2: Plans Own Activities in Relationship to Nutrition Program Objectives and Guidelines

Instruction	Assessment
2.1 List foodservice staff activities related to each Nutrition Component objective.	2.1 Describes his/her job in relationship to meeting program objectives.
2.2 Plan a nutritious snack that the children can prepare that meets program requirements.	2.2 Demonstrates knowledge of nutrition and other program requirements in planning a children's activity that meets the requirements.

Instruction	Assessment
2.3 View a film and/or participate in discussion showing the relationship of nutrition program staff to child growth and development.	2.3 In discussion, answers review questions on film or answers Instructor's questions on how each the member of the nutrition program staff works to foster healthy development of the children.

Handout No. Ia

24-HOUR RECALL

TIME	WHERE	WHAT	AMOUNT

Handout No. Ib

MEAL ANALYSIS

	MILK	MEAT	F/V	BR/CEREAL
BREAKFAST				
LUNCH				
DINNER				
ACTUAL				
NEEDED				
CONTENTS:				

CHILD CARE FOOD PROGRAM MEAL PATTERNS

Handout No. Ic

(From Regulations for the Child Care Food Program 1978. Check with latest regulations. Proposed new regulations were in clearance stage at the time this manual was printed.)

226.10 Requirements for meals.

(a) Each child care center and family and group day care home participating in the Program shall serve one or more of the following types of meals as provided in approved applications: (1) Breakfast; (2) Lunch; (3) Supper; (4) Supplemental food served between such other meals, except that supplemental food shall not be approved for reimbursement if the institution also participates in the Special Milk Program for Children (7 CFRP Part 215)....

FNS may approve variations in the food components of the meals on an experimental or a continuing basis in any institution where there is evidence that such variations are nutritionally sound and are necessary to meet ethnic, religious, economic or physical needs.

The following table shows the required meal patterns for children:

Food Components	Children 1 up to 3 years	Children 3 up to 6 years
BREAKFAST		
Milk, fluid whole	1/2 cup	3/4 cup
Juice or fruit	1/4 cup	1/2 cup
Cereal and/or Bread,* enriched or whole grain		
Cereal	1/4 cup	1/3 cup
Bread	1/2 slice	1/2 slice
MID-MORNING OR MID-AFTERNOON SUPPLEMENT (SNACK)		
Milk, fluid whole, or juice or Fruit or vegetable	1/2 cup	1/2 cup
Bread or Cereal,* enriched or whole grain		
Bread	1/2 slice	1/2 slice
Cereal	1/4 cup	1/3 cup
LUNCH OR SUPPER		
Milk, fluid whole	1/2 cup	3/4 cup
Meat and/or alternate		
One of the following or combinations to give equivalent quantities:		
Cooked meat, poultry, or fish**	1 ounce	1-1/2 ounce
Cheese	1 ounce	1-1/2 ounce
Egg	1	
Cooked dry beans or peas	1/4 cup	3/8 cup
Peanut butter	2 tablespoons	3 tablespoons
vegetable and/or fruit***	1/4 cup	1/2 cup
Bread,* enriched or whole grain	1/2 slice	1/2 slice

*Or an equivalent serving of cornbread, biscuits, rolls, muffins, etc., made of enriched or whole grain meal or flour.

**Cooked lean meat without bone.

***Must include at least two kinds.

COMPETENCY AREA II - JOB MANAGEMENT

People are Head Start's greatest assets. These human resources can be developed through management training into more effective workers. Foodservice workers generally have not participated in management training even when it is available to other staff in the program. One of the outcomes of training should be an increase in the confidence of Trainees that they can manage and exercise some control over their own jobs while operating under the constraints of their position in the program.

Through discussions and role play situations, Trainees can explore effective ways of communicating with each other and with their superiors. In these discussions, job frustrations will always surface. The Instructor for this unit should be skilled in human relations training. He/she must know how to accept the feelings expressed and avoid suggesting a specific course of action.

Local colleges and universities that have business or economics departments are excellent sources of information on work efficiency.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Visual Aids

Film: Eye of the Supervisor (34)

Film: The Training Memorandum (56)

Books

American Hospital Association, Food Service Manual for Health Care Institutions (60)

Morgan, W., Supervision and Management of Quantity Food Preparation (72)

Ross, L., Work Simplification in Food Service (74)

West, B., et al., Food Service in Institutions (80)

COMPETENCY AREA II - JOB MANAGEMENT

COMPETENCY II A: Manages own job and coordinates with others.

1. Demonstrates interest in growth and self-discipline in managing the job.
2. Uses organization charts and job descriptions as management tools.
3. Schedules own work or follows schedule to coordinate with other staff for regular and special activities.
4. Cooperates with teaching staff in planning and implementing classroom food activities.

COMPETENCY II B: Communicates effectively with program staff and parents.

1. Describes effective ways to deliver different kinds of messages to different groups of people.
2. Develops written and/or pictorial communications, and communicates verbally as appropriate about the foodservice program.

COMPETENCY II C: Makes efficient use of time and energy.

1. Uses principles of work simplification in everyday activities.
2. Participates in designing the foodservice system for maximum staff efficiency.

COMPETENCY II A

MANAGES OWN JOB AND COORDINATES WITH OTHERS

A1: Demonstrates Interest in Growth and Self-Discipline in Managing on the Job

Instruction	Assessment
1.1 Discuss with the Instructor the importance of good management in foodservice programs, and how you plan to use your training in managing your job.	1.1 Demonstrates a desire to continue to learn more about the functions of management.
1.2 Tell how each of your daily activities relates to planning, organizing and controlling the activities of the foodservice operation.	1.2 Classifies own activities by management function.

A2: Uses Organization Charts and Job Descriptions As Management Tools

Instruction	Assessment
2.1 Obtain the organization chart for your program which includes the nutrition and foodservice positions. Compare to organizational charts from other programs, and compare to Handout IIa, Suggested Organization Charts, to see the similarities and differences in: a. Lines of authority within the nutrition program and between the nutrition program and administration. b. Number of foodservice positions. c. Position titles for foodservice positions.	2.1 Reviews organization chart for program to identify lines of authority, and number and type of positions.
2.2 Develop an ideal organization chart for your foodservice operation, and tell why you think it is ideal.	2.2 Develops or revises an organization chart for own foodservice operation.
2.3 Discuss titles of foodservice workers, reasons for having titles, and your own feelings about titles.	2.3 Explains the importance of titles to the program and to the individual.

	Instruction		Assessment
2.4	Review and discuss Handout IIb, Suggested Job Titles and Responsibilities.	2.4	In discussion, refers to purpose and content of job descriptions.
2.5	List the major duties and responsibilities of the foodservice staff in your program. Begin with your own position. Obtain the job descriptions of the foodservice staff in your program if possible, and compare with your lists.	2.5	Identifies major duties and responsibilities of the foodservice staff in own program.
2.6	If you do not have a job description for your position, write one. If you do have a job description, review it to see if it is up-to-date.	2.6	Writes own job description or suggests revisions to make job description current.

A3: Schedules Own Work or Follows Schedule to Coordinate With Other Staff

	Instruction		Assessment
3.1	By referring to a weekly menu, choose one day and plan or explain a schedule for preparing the menu at your program, including food preparation tasks to do the day before. Show the starting and total time for preparing each item, the utensils and food needed, and the person responsible for each task.	3.1	Plans or explains a schedule for staff and equipment for preparing daily menu.
3.2	Describe or develop a schedule for weekly foodservice tasks such as the weekly cleaning schedule, the schedule for ordering and receiving different types of food, record-keeping tasks, etc.	3.2	Develops a schedule for weekly foodservice tasks or describes the schedule to be followed.
3.3	Describe the special activities at your center that affect the schedule of the foodservice staff. Show how to adjust the schedule and/or staffing to allow for these activities, and describe the kind of problems you might have in making schedule adjustments or reassigning personnel.	3.3	Adjusts or tells how to adjust schedule or staffing for special activities and describes the problems to be resolved in making the adjustments.

A4: Cooperates With Teaching Staff in Planning and Implementing Classroom Food Activities

	Instruction		Assessment
4.1	With a group of trainees or other persons from the program, plan nutrition education activities for the children that would require the cooperation of classroom and foodservice personnel (see Nutrition Education for the Young Child).	4.1	With other staff members, plans nutrition education activities.
4.2	With a teacher, plan your part in a food activity around a theme being taught to the children keeping the activity and learning concept simple (see Nutrition Training Guide for Classroom Personnel in Head Start Programs).	4.2	With a teacher, plans to participate in a food activity around a classroom theme.

COMPETENCY II B

COMMUNICATES EFFECTIVELY WITH PROGRAM STAFF AND PARENTS

B1: Describes Effective Ways to Deliver Different Types of Messages to Different Groups of People

Instruction	Assessment
1.1 Describe effective ways to communicate: a. Menus to parents, teachers, and to foodservice staff. b. Food costs to the Director and to foodservice staff. c. Employee concerns to the Director. d. Kitchen rules to volunteers.	1.1 Describes effective ways to communicate specific types of messages to program staff, parents and volunteers.
1.2 Choose one situation in oral communication from the above list for a role play. Evaluate the role play.	1.2 Evaluates oral communications in program.
1.3 Evaluate the effectiveness of written communications from your foodservice program and make suggestions for improvements.	1.3 Evaluates written communications in the program.

B2: Develops Written and/or Pictorial Communications and Communicates Orally As Appropriate About the Foodservice Program

Instruction	Assessment
1.1 Develop articles for newsletters for parents, flyers and posters that tell other staff members and parents about the foodservice program.	1.1 Develops written and/or pictorial communications about the foodservice program.
1.2 Participate in a case conference where discussion pertains to a handicapped child, or a child requiring a modified diet.	1.2 Communicates orally regarding the foodservice program as appropriate.

COMPETENCY II C

MAKES EFFICIENT USE OF TIME AND ENERGY

C1: Uses Principles of Work Simplification in Everyday Activities

Instruction	Assessment
1.1 Discuss the principles of efficient use of time and energy in specific food preparation tasks, and give examples of application. Use Handout IIc, Techniques of Work Simplification.	1.1 Identifies examples of efficient and inefficient use of time and energy in specific food preparation tasks.
1.2 Demonstrate a cleaning task, such as cleaning the range, and discuss principles of motion economy as they apply to the task.	1.2 Demonstrates and explains use of motion economy for a specific task.

C2: Participates in Designing the Foodservice System for Maximum Staff Efficiency

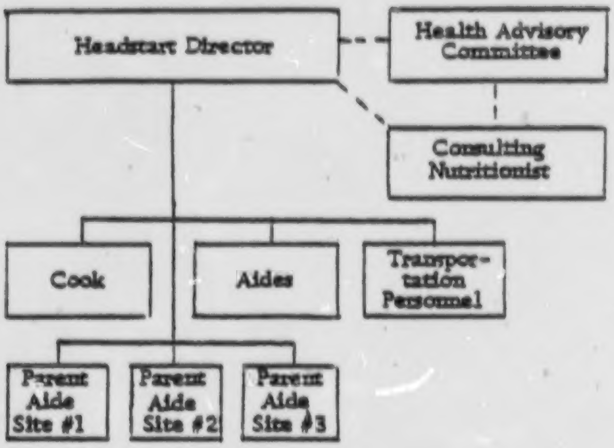
Instruction	Assessment
2.1 Diagram the foodservice work areas in your kitchen and other locations: a. Make a floor plan of your kitchen and the food receiving and storage areas showing the location of all walls, major equipment, cabinets and work surfaces. b. On the floor plan, label the work areas for menu planning, keeping records, receiving food, storing food, preparation areas for different types of food (baking center, salad preparation, etc.) serving food, dishwashing, potwashing, and waste disposal.	2.1 Identifies the foodservice work areas in the kitchen and other locations.
2.2 Pointing to the areas shown on the diagram, describe how you would move from one task to another on a typical day. Make suggestions for improving your work flow with and without moving any walls or major equipment.	2.2 Evaluates the overall work flow pattern for the foodservice operation and makes suggestions for improvement.

Instruction	Assessment
2.3 Discuss ways of designing or redesigning the following foodservice operations at your center for maximum staff efficiency: a. Menu Planning b. Record-keeping c. Placing food in storage d. Dishwashing	2.3 Participates in designing specific food service duties for maximum staff efficiency

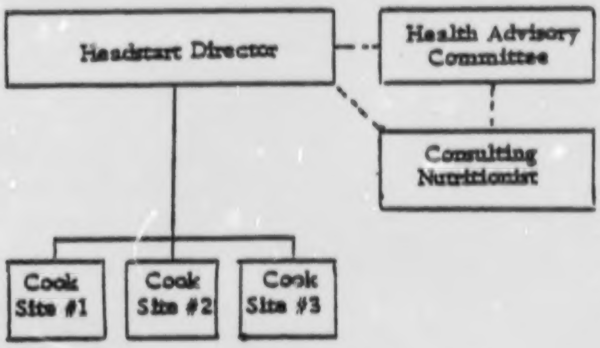
Handout No. IIa

SUGGESTED ORGANIZATION CHARTS FOR SMALL PROGRAMS

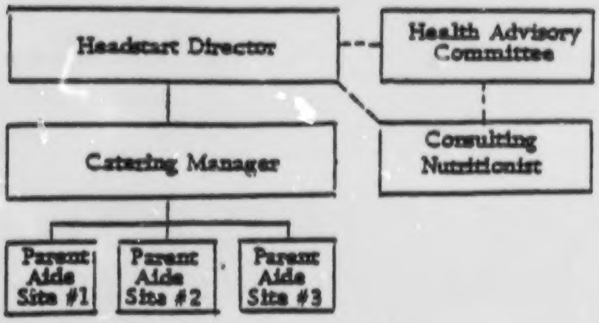
Central Food Preparation


Headstart Director
Health Advisory Committee
Consulting Nutritionist
Cook
Aides
Transportation Personnel
Parent Aide Site #1
Parent Aide Site #2
Parent Aide Site #3

Onsite Food Preparation


Headstart Director
Health Advisory Committee
Consulting Nutritionist
Cook Site #1
Cook Site #2
Cook Site #3

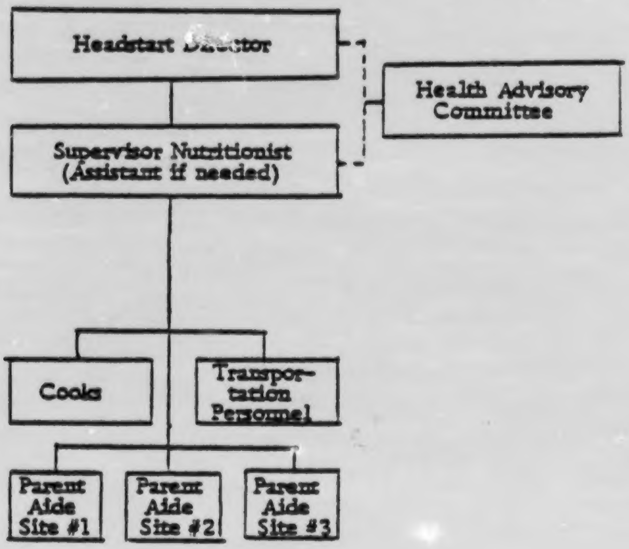
Catered Food Preparation


Headstart Director
Health Advisory Committee
Consulting Nutritionist
Catering Manager
Parent Aide Site #1
Parent Aide Site #2
Parent Aide Site #3

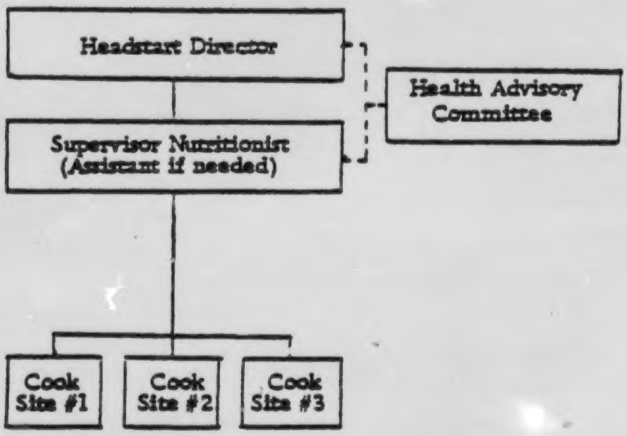
Handout No. IIa
(Page 2)

SUGGESTED ORGANIZATION CHARTS FOR LARGE PROGRAMS

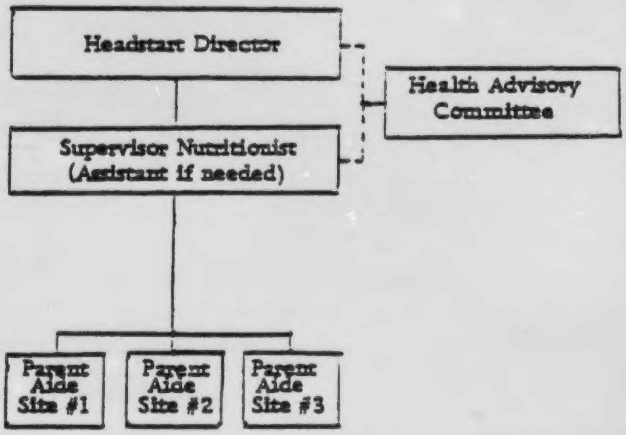
Central Food Preparation


Headstart Director
Health Advisory Committee
Supervisor Nutritionist (Assistant if needed)
Cooks
Transportation Personnel
Parent Aide Site #1
Parent Aide Site #2
Parent Aide Site #3

Onsite Food Preparation


Headstart Director
Health Advisory Committee
Supervisor Nutritionist (Assistant if needed)
Cook Site #1
Cook Site #2
Cook Site #3

Catered Food Preparation


Headstart Director
Health Advisory Committee
Supervisor Nutritionist (Assistant if needed)
Parent Aide Site #1
Parent Aide Site #2
Parent Aide Site #3

Handout No. IIb

SUGGESTED JOB TITLES AND RESPONSIBILITIES OF PERSONNEL IN THE NUTRITION COMPONENT

Cook Managers

Responsibilities:

1. Plan menu in cooperation with parents and nutritionist.
2. Purchase and maintain proper receiving of foods to assure quality and cost control.
3. Maintain proper storage and control of waste.
4. Prepare and serve food.
5. Supervise and train aides and volunteers.
6. Keep proper records -- purchases, inventory, meals served, etc.
7. Supervise maintenance of equipment, kitchen and dining areas.
8. Maintain good sanitation and safety practices, including personal appearance and hygiene.
9. Participate in food related learning activities:
    a. Eating with children at least periodically.
    b. Classroom participation in introducing new foods to children and other food-related learning experiences.
    c. Include children in assisting with preparation and clean up.
10. Participate and assist in planning for parent nutrition and consumer education.
11. Assist with budget planning (Food Service Costs).
12. Use available resources: commodity foods, milk program, community nutrition personnel, etc.
13. Other duties as assigned.

Cook/Manager's Aide

Responsibilities:

1. Assist in food preparation, service and clean up.
2. Carry out safety, sanitation and hygiene regulations.
3. Participate in food related learning experiences with children.
4. Assist cook manager in parent related activities.
5. Other duties as assigned.

Handout No. IIb
(Page 2)

Nutritionist

Responsibilities:

1. Give leadership to the development of an integrated and quality nutrition program in the Center, and assist in evaluation and enrichment of all facets of the component.
2. Work cooperatively with the cook manager and parents to develop a nutritionally adequate menu suitable for Head Start children and facilities.
3. Advise director, cook manager, and parents, in preparation of a budget for the nutrition component.
4. Assist in determining training needs of persons in the nutrition component and in providing the training when appropriate.
5. Participate in the development of training plans for all staff in the area of nutrition and food, and assist in the training program.
6. Encourage and give direction to parent involvement in nutrition service, in the Center, parent education and relevant community programs.
7. Other duties as needed.

WORK SIMPLIFICATION TECHNIQUES

Work simplification is the process of doing a job better by incorporating ways to make the work easier, faster and less expensive. It allows foodservice personnel to "work smarter, not harder."

Work simplification gives the employee more confidence; it fosters creative thinking and increases job satisfaction. It improves the quality and productivity of the foodservice program by eliminating nonessential work.

Steps involved in improving a job through work simplification:

- Select the job to be improved. (Look for those which may waste material, energy or time.)
- Make a detailed breakdown of the job. List the order in which each step in the job must be performed. Include material, equipment, time and distance spent in completing each task.
- Ask questions and challenge each task. (Is the task necessary or can it be changed to make it easier or faster?)
- Work out a better method of doing the job. (Perhaps methods can be eliminated, combined, rearranged or simplified.)
- Train foodservice employees to use the new method until a still better way is developed.

General principles of work simplification in the kitchen:

- Use smooth flowing motions.
- Make both hands productive at the same time.
- Make hand and body motions few, short and simple. If possible, use a hand motion instead of an arm motion; use an arm motion instead of a body motion.
- Maintain comfortable working positions and conditions. The most important single piece of equipment used in doing the job is the body. By holding the spine straight, the muscles can maintain good posture. There is a minimum of strain and effort whether you are working, sitting, standing or walking.

- A chair or table that is the correct height allows a person to sit or to stand properly and comfortably. Good lighting is necessary for good vision. Ventilation is important for the worker to be comfortable. Temperature for food preparation and service areas should be maintained at 68 to 75 degrees Fahrenheit. Maintain relative humidity at 50 to 60 percent. Noise level should be controlled using sound-absorbing ceilings, smooth-running motors and mobile equipment with neoprene wheels. Resilient floors are less tiring than hard floors. This type of flooring should be used when people are standing for extended periods.

- Position materials for efficient sequence of motions.

- Use the best available equipment for the job and understand the operating, cleaning and maintaining of each piece of equipment.

- Locate activity in normal work areas where possible.

- Store material in an orderly manner. Frequently used items should be stored close to where they are used. Less frequently used items can be stored farther away. Rarely used items may be stored away form the immediate work area.

Work simplification principles in management:

- Plan the menus in cycles according to a menu pattern, or at least three weeks in advance.

- Use standardized recipes.

- Keep up-to-date with helpful books, magazines, posters, pictures and newsletters.

- Maintain standard forms for records, requisitions, purchases, and inventories.

- Maintain a good filing system with separate folders for different types of records so that all records can be readily located.

- Use work schedules for equipment and personnel.

- Maintain good lighting, comfortable working temperatures, cleanliness and good working conditions for all employees.

- Keep equipment in good condition by using good maintenance programs to prevent breakdowns.

COMPETENCY AREA III - SANITATION AND SAFETY

All foodservice operations are potential sources for the spreading of foodborne illnesses. The large volume of food which is handled and the number of food handling contacts make it imperative that food be protected from contamination at every step from production to consumption. It is also important that food be processed and stored at correct temperatures and within critical time periods so that bacterial growth within the food will not reach levels that make the food unsafe to eat. It is essential that all personnel handling food understand how to keep it wholesome.

The importance of knowledge and practices which protect food to be consumed by young children cannot be overemphasized. Young children have lower resistance to foodborne infection than older children and adults who have developed immunities. In addition, they are likely to suffer more serious consequences than older children and adults from eating contaminated food because of their smaller body size in relation to the amount of the unsafe substance ingested.

Training in safe work practices that protect personnel from injury is also important for all foodservice staff. Ignorance and carelessness can be costly. Personnel often have to operate under pressure and must respond safely and quickly to unexpected situations.

Because sanitation and safety considerations permeate every aspect of a foodservice, training in this competency area should be ongoing for all personnel. Group sessions will heighten awareness of principles and correct procedures. Staff who have not received any training in sanitation or who have not received training recently should not be permitted in food preparation and storage areas. The presence of children and visitors should be limited and strictly controlled.

Although this Guide points out generally accepted practices, local regulations must be followed and may be more stringent. The local health department is one obvious information resource for the Instructor. The fire inspector or the fire department should be consulted also.

First aid training for personnel can be obtained from the local Red Cross unit or the local fire department. Some detergent manufactures provide training in sanitation, and some equipment manufacturers provide training in safety as well as sanitation, depending upon the type of equipment involved. The local hospitals and universities are also excellent training resources.

An important benefit of training in sanitation and safety is improved worker practices at home leading to fewer sick days and improved job performance. The training of workers in these areas can often be expanded to the children and their parents as part of a general health improvement program.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for Trainees

USDA/FNS, Food Storage Guide for Schools and Institutions - PA 403 (15)

HEW/PHS, The Food Service Sanitation Manual, 1976, DHEW Publication No. (FDA)78-2081 (6)

Audiovisual Aids

Kitchen Safety: Preventing Burns (41)
Kitchen Safety: Preventing Cuts and Strains (42)
Kitchen Safety: Preventing Falls (43)
Kitchen Safety: Preventing Fires (44)
Kitchen Safety: Preventing Machine Injuries (45)
Sanitation: Why All the Fuss? (54)
Sanitation: Rules Make Sense (53)
Protecting the Public, Part I: The Personal Side (50)
Protecting the Public, Part II: Food Protection (50)
Lift With Your Head (46)
Mr. Dishmachine Operator (49)
Clean Dishes (32)
Washing Up, Parts I and II (58)

U.S. Government Publications

HEW/PHS, The Food Service Sanitation Manual (6)

Books

Longree K. and G. Blaker, Sanitary Techniques in Foodservice (69)

COMPETENCY AREA III - SANITATION AND SAFETY

COMPETENCY III A: Establishes and maintains safe and sanitary practices among foodservice personnel.

1. Establishes and maintains a safe working environment.
2. Establishes and maintains safe working practices and habits among personnel.
3. Performs emergency first aid procedures and follows established procedures in obtaining medical, fire, or police assistance for emergencies.
4. Establishes and maintains sanitary practices among foodservice personnel.

COMPETENCY III B: Operates and keeps equipment sanitary and in good working order.

1. Correctly and safely operates each piece of equipment found in the program.
2. Maintains equipment in good working order and knows correct procedures in the event of equipment malfunction.
3. Operates and maintains each piece of equipment in a sanitary manner.
4. Correctly determines need for firefighting action and takes correct action in the event of an emergency.

COMPETENCY III C: Receives and stores food in a safe and sanitary manner.

1. Receives food in a sanitary manner.
2. Stores food in a sanitary manner.
3. Stores food safely.

COMPETENCY III D: Maintains food preparation area in a safe and sanitary manner.

1. Maintains personal cleanliness among employees.
2. Establishes and maintains sanitary food preparation techniques.
3. Maintains food preparation area in a safe manner.

COMPETENCY III E: Maintains safe and sanitary practices in the transporting and serving of food.

1. Maintains safe and sanitary conditions in the dining area, including the serving of food.
2. Maintains safe and sanitary practices in transporting food.

COMPETENCY III F: Maintains safe and sanitary practices during clean-up.

1. Demonstrates proper use of cleaning equipment and products in routine kitchen clean-up.
2. Uses correct procedures for dishwashing, storing left-over food and handling of food waste, and paper supplies.

COMPETENCY III A

ESTABLISHES AND MAINTAINS SAFE AND SANITARY PRACTICES AMONG FOODSERVICE PERSONNEL

A1: Establishes and Maintains a Safe Working Environment

	Instruction		Assessment
1.1	Review Handout IIIa, Self-Inspection Checklist for Safety in the Kitchen, and use the handout as a checklist to perform self-inspection for safety in the kitchen.	1.1	Completes self-inspection checklist for safety in the kitchen.
1.2	Plan corrective measures for the safety hazards indicated by "no" answers on the self-inspection checklist. Indicate in the plan when the corrective measures will be taken, and implement the plan immediately.	1.2	Plans and implements corrective measures for safety deficiencies with timetable.

A2: Establishes and Maintains Safe Working Practices and Habits Among Personnel

	Instruction		Assessment
2.1	Review Handouts IIIb, General Guidelines for Working with Equipment; IIIc, Safety Precautions Using Commercial Cooking Equipment; and IIId, Safety Precautions in Using Commercial Food Preparation Equipment. Ask questions for clarification and answer the Instructor's questions.	2.1	Discusses safety precautions with trainer or supervisor and correctly interprets the information as demonstrated in discussion.
2.2	Observe and evaluate self and/or personnel for compliance with safety measures reviewed above. Correct your performance and the performance of those you supervise.	2.2	Correctly assesses safety practice in kitchen. Implements change in own and/or staff performance.
2.3	Demonstrate safe operation of one or several pieces of small or large equipment.	2.3	Correctly demonstrates safe operation or techniques.

Instruction	Assessment
2.4 Discuss supervisory techniques for maintaining safe working practices among foodservice personnel. View one or more films on kitchen safety: Kitchen Safety: Preventing Burns	2.4 Lists supervisory techniques for maintaining safe working practices among foodservice personnel.

A3: Performs Emergency First-Aid Procedures and Follows Established Procedures in Obtaining Medical, Fire, or Police Assistance for Emergencies

Instruction	Assessment
3.1 Obtain Emergency First-Aid Instruction from local Red Cross chapter. Review and discuss. (Instructor may also investigate free first-aid courses given by many Red Cross chapters.)	3.1 Explains proper first aid procedures for various emergencies and demonstrates procedures or has Red Cross first-aid certificate.
3.2 Post local emergency phone numbers (police, fire, ambulance) in obvious locations in the kitchen.	3.2 Understands the importance of posting emergency telephone numbers in obvious locations in the kitchen, and posts the numbers.
3.3 Discuss with administrator emergency policies and procedures established for the center.	3.3 Explains emergency policies and procedures to personnel and trainer.

A4: Establishes and Maintains Sanitary Practices Among Foodservice Personnel

Instruction	Assessment
4.1 Review Handout IIIe, Personal Cleanliness. Describe health precautions and good personal cleanliness habits in your own words.	4.1 Describes methods of maintaining personal cleanliness among foodservice personnel.
4.2 Review Handout IIIf, Overview of Foodborne Illness, and discuss the relationship of sanitation to disease prevention.	4.2 Describes the relationship between sanitation and disease prevention.

Instruction	Assessment
4.3 Discuss supervisory techniques for maintaining sanitary food handling practices among foodservice personnel.	4.3 Lists supervisory techniques for maintaining sanitary food handling practices among foodservice personnel.
4.4 Identify and review appropriate government (all levels) standards for the sanitary operation of a foodservice.	4.4 Identifies and explains all applicable government standards.
4.5 View and discuss films: Sanitation: Why All the Fuss? Rules Make Sense	4.5 Reviews sanitation principles by viewing educational films and/or participating in guided discussions.

COMPETENCY III B

OPERATES AND KEEPS EQUIPMENT IN GOOD WORKING ORDER

B1: Correctly and Safely Operates Each Piece of Equipment Found in the Center Program

Instruction	Assessment
1.1 Locate and peruse equipment manuals. File in one location.	1.1 Explains importance of operation manuals for equipment and knows where to locate them in the file.
1.2 Demonstrate and explain proper use of each piece of kitchen equipment to include: a. Dishwasher. b. Small electrical appliances, such as mixers. c. Small mechanical appliances, such as can openers. d. Exhaust systems e. Food waste disposer. f. Refrigerator. g. Freezer. h. Ovens and ranges.	1.2 Exhibits knowledge and skill to properly operate each piece of kitchen equipment.

B2: Maintains Equipment in Good Working Order and Knows Correct Procedures in the Event of Equipment Malfunction

Instruction	Assessment
2.1 Discuss procedures for keeping equipment in good working order. List on blackboard.	2.1 Lists procedures for keeping equipment in good working order.
2.2 Identify service contacts for each major piece of equipment as well as availability of replacement parts. Know where to obtain this information in a desk card file or develop and maintain a file.	2.2 Uses and maintains desk file to identify contacts and phone numbers in the event of equipment malfunction.

B3: Operates and Maintains Each Piece of Equipment in a Sanitary Manner

Instruction	Assessment
3.1 Demonstrate correct cleaning procedure for each piece of kitchen equipment in the center. Include disassembly and reassembly of equipment as appropriate.	3.1 Correctly demonstrates cleaning procedures for each piece of kitchen equipment.
3.2 Review and demonstrate procedure for automatic and/or manual cleaning of eating and cooking utensils.	3.2 Correctly demonstrates procedures for automatic and/or manual dishwashing and potwashing procedures.
3.3 Review importance of regular cleaning schedule. If none exists, develop one for center.	3.3 Discusses importance of posted cleaning schedule. If none exists, writes feasible schedule to include staff assignments for center.
3.4 Review types of detergents and sanitizers and appropriate uses. (Longree and Blaker, Sanitary Techniques in Foodservice, is a good reference. In addition, most detergent distributors maintain a budget and program for training of client staff. Services available usually include printed information as well as audiovisual materials.)	3.4 Lists types of detergents and sanitizers and their appropriate uses. For example: a. A detergent with defoaming action for a dishwashing machine. b. A suds-producing hand washer.

B4: Correctly Determines Need for Firefighting Action and Takes Correct Action in the Event of An Emergency

Instruction	Assessment
4.1 Check extinguisher in kitchen for expiration date. Discuss importance of periodic checks by authorized personnel. (Distributor or local fire authority.)	4.1 Finds expiration date; discusses importance of regular checks.
4.2 Discuss type of fire extinguisher at center and what types of fire it can be used on.	4.2 Explains use of fire extinguisher.
4.3 Discuss fire safety procedures in the kitchen. (The local fire department can be used as a resource for this unit. Ask to have an officer visit the center to discuss safety precautions, emergency procedures, etc.).	4.3 Lists fire safety procedures in the kitchen.

COMPETENCY III C

RECEIVES AND STORES FOOD IN A SAFE AND SANITARY MANNER

C1: Receives Food in a Sanitary Manner

Instruction	Assessment
1.1 State the precautions for sanitary handling of food at the time of delivery: a. Authorized personnel. b. Inspection of perishable products, packaging, delivery truck (should be refrigerated for perishables). c. Rejection of food not at proper temperature (if frozen or refrigerated) or showing signs of decay or damaged packaging. d. Immediate placement of food into storage.	1.1 Receives food if authorized, inspects for cleanliness, freshness and proper temperature, rejects if not meeting standards, and places food into storage immediately.

C2: Stores Food in a Sanitary Manner

Instruction	Assessment
2.1 With the Instructor, read pp. 6-18 of Food Storage Guide for Schools and Institutions, FNS-403, and answer Instructor's questions.	2.1 Identifies characteristics of a sanitary storeroom.
2.2 Using Handout IIIg, Self-Inspection Checklist for Food Storage Areas, and IIIh, Temperatures for Food Safeness, examine the dry and refrigerated food storage areas at the center or program. Plan a correction program with a timetable.	2.2 Performs a self-inspection of food storage areas at the center. Identifies deficiencies and plans a program of corrections to include timetable.
2.3 Review sanitation schedule as developed earlier in unit for inclusion of storeroom sanitation maintenance.	2.3 Revises sanitation schedule as necessary to include storage areas.

Instruction	Assessment
2.4 View and discuss film, Sanitation: Rodent and Insect Control, or other film on rodent and insect control. Answer Instructor's questions on film.	2.4 Describes proper methods for protecting food from insects and rodents.
2.5 Discuss procedures for cleaning the dry food storage area, refrigerators and freezers. Refer to Longree & Blaker, Sanitary Techniques in Foodservice.	2.5 Explains proper cleaning procedures for dry food storage areas.
2.6 Review storage shelf life of dry, refrigerated, and frozen foods. See Handout IIIi, Guidelines for Food Storage.	2.6 Lists storage shelf life of dry, refrigerated and frozen foods.
2.7 Discuss first-in/first-out concept of storeroom rotation.	2.7 Explains importance of first-in/first-out.
2.8 Review Handout IIIj, Considerations When Locating or Remodeling a Storeroom, and identify good design features.	2.8 Identifies good design features for storeroom.

C3: Stores Food Safely

Instruction	Assessment
3.1 Review pp. 6-18 of Food Storage Guide for Schools and Institutions, FNS-403, and Handout IIIg, Self-Inspection Checklist for Food Storage Areas.	3.1 Identifies characteristics of a safe storeroom.
3.2 Review self-inspection report prepared earlier for compliance with safety factors.	3.2 Reviews self-inspection report for compliance with safety factors.
3.3 Since safe storage of food is dependent upon safe storage of cleaning compounds and sanitizers, discuss safe and secure procedures for these. Review state standards for above.	3.3 Lists criteria for safe storage of cleaners to include: a. Original packaging. b. Proper labeling. c. In locked storage areas. d. At all times out of reach of children.

COMPETENCY III D

MAINTAINS FOOD PREPARATION AREA IN A SAFE AND SANITARY MANNER

D1: Maintains Personal Cleanliness Among Employees

Instruction	Assessment
1.1 Review Handout IIIe, Personal Cleanliness, and list the rules relating to food preparation.	1.1 Lists rules of personal hygiene especially as they relate to food preparation.
1.2 View and discuss filmstrip: Protecting the Public, Part I: The Personal Side, or other film on good personal hygiene for foodservice personnel.	1.2 Explains importance of good personal hygiene in serving and preparing a safe, wholesome food product.
1.3 Discuss local requirements for food handler's health examination. Correct deficiencies, as indicated.	1.3 Explains importance of a "clean bill of health." Promptly follows through on any necessary health exams for self and/or workers.

D2: Establishes and Maintains Sanitary Food Preparation Techniques

Instruction	Assessment
2.1 Review Handout IIIf, Overview of Foodborne Illness, and Handout IIIh, Temperatures for Food Safeness. Discuss "Danger Zone", i.e. temperature between 45°-140° F where microorganisms thrive.	2.1 Explains relationship of temperature to occurance of foodborne illness.
2.2 View and discuss filmstrip: Protecting the Public, Part II: Food Protection.	2.2 Lists all the ways food can become contaminated during preparation.

Instruction	Assessment
2.3 Demonstrate and discuss the proper method of: a. Handling raw foods, especially meat and poultry. b. Preventing cross-contamination between raw and cooked foods. c. Defrosting frozen foods. d. Preparing foods from the frozen state when possible. e. Heating foods to proper temperatures to prevent spoilage and to destroy toxins if present. f. Holding foods at proper cold and hot temperatures. g. Quick cooling of foods whether made the day ahead or after service.	2.3 Discusses and, where possible, demonstrates proper techniques of handling foods to protect from contamination and spoilage and to destroy toxins if present.
2.4 Review latest inspection report from health department. Discuss corrective measures taken where necessary. Discuss licensing standards.	2.4 Explains importance of periodic health inspections and relationship to licensing requirements.
2.5 Review cleaning schedule for inclusion of food preparation area. Discuss "clean as you go" technique.	2.5 Explains importance of maintaining a sanitary food preparation area.

D3: Maintains Food Preparation Area in a Safe Manner

Inspection	Assessment
3.1 Discuss safety precautions in the food preparation area including: a. Safe use of equipment (reference Competency III B). b. Locating hazardous equipment out of the reach of children. c. Storing items not needed for foodservice in other areas. d. Proper handling of hot foods and liquids. e. Cooking. f. Wiping up spills. g. Sources of possible accidents due to clutter or lack of maintenance, e.g. loose floor boards, cluttered work areas, etc.	3.1 Lists rules for safety in the kitchen. Discusses importance of each.

Inspection	Assessment
3.2 Review Handout IIIk, Kitchen Safety Rules. Review Handout IIIa, Self-Inspection Checklist for Safety in the Kitchen. Perform safety self-inspection using above handout. Plan for and correct any deficiencies cited. Report deficiencies which require major corrective action to program director.	3.2 Completes safety self-inspection. Promptly corrects or reports any deficiencies.
3.3 View and discuss filmstrip, Work Smart - Stay Safe. View optional films: Kitchen Safety: Preventing Burns Preventing Cuts and Strains Preventing Falls Preventing Machine Injuries	3.3 Lists safe work habits as exemplified in filmstrip or films.

COMPETENCY III E

MAINTAINS SAFE AND SANITARY PRACTICES IN THE TRANSPORTING AND SERVING OF FOOD

E1: Maintains Safe and Sanitary Conditions in the Dining Area, Including the Serving of Food

Instruction	Assessment
1.1 For each principle of safe and sanitary food handling which you have recalled, name specific hazards in safe transportation of food to the center or safe transporting of food from kitchen to classroom used as a dining area including: a. Maintaining safe and proper temperature of foods. b. The use of sanitary utensils, equipment and food transporting practices. c. The use of safe utensils and food transporting practices.	1.1 States criteria for the safe and sanitary transportation of food, and names specific hazards.
1.2 Evaluate and make suggestions for improving your dining area for safety, including: a. Arrangement of chairs, tables and foodservice for safety, including passageways. b. Safe conduct of children. c. Safe and sturdy serving and eating utensils (see Head Start Performance Standards). d. Disposal of cracked or chipped utensils and dishes. Evaluate the sanitary conditions of your dining area, including: a. Cleanliness of the dining area. b. Provisions for replacing dropped utensils. c. Provisions for cleaning up spills. d. Keeping trash can covered and area around can clean and uncluttered. Make suggestions for improvements.	1.2 Evaluates dining area in terms of safety and sanitation and makes suggestions for improvements.

Instruction	Assessment
1.3 Recall the principles you have learned so far in safe and sanitary food handling. For each principle, name specific hazards in the safe and sanitary serving of food including: a. Maintaining safe and proper temperature of food during serving (Example: unsafe to serve cooked food into unheated serving dishes too long before mealtime). b. The use of sanitary utensils and serving practices (Example: spoon stored in dirty tray unsanitary; picking up spoon by bowl unsanitary). c. The use of proper and safe utensils and serving practices (Example: unsafe to use unwashed classroom furniture for serving space).	1.3 States criteria for the safe and sanitary serving of food, and names specific hazards.

COMPETENCY III F

MAINTAINS SAFE AND SANITARY PRACTICES DURING CLEAN-UP

F1: Demonstrates Proper Use of Cleaning Equipment and Cleaning Products in Routine Kitchen Clean-up

Instruction	Assessment
1.1 Discuss the proper use of cleaning equipment and products.	1.1 Demonstrates proper use of cleaning equipment. Lists cleaning products and their appropriate uses.

F2: Uses Correct Procedures for Dishwashing, Handling Trash and Garbage, and Storing Left-Over Food

Instruction	Assessment
2.1 Discuss safe and sanitary procedures for the handling of trash and garbage. View film, Sanitary Storage and Collection of Refuse.	2.1 Lists correct procedures for handling trash and garbage.
2.2 Discuss correct procedures for storage of left-over foods.	2.2 Lists correct procedures for storage of left-over foods.
2.3 Discuss safe and sanitary dishwashing procedures. Post dishwashing procedure if it is not already. Make suggestions for improving your dishwashing procedures. View film, Mr. Dishmachine Operator View optional slide sets, Clean Dishes Washing-up, Part I and Part II	2.3 Explains correct dishwashing procedures. Evaluates clean-up activities and makes suggestions for improvement.

SELF-INSPECTION CHECKLIST FOR SAFETY IN THE KITCHEN

A. Burns

1. Are handles of pans on the range turned so the pans cannot be knocked off?
2. Is heat turned off when removing pans from range?
3. Are dry pot holders used for lifting hot pans?
4. When removing the cover from a boiling pan, is the cover pulled forward and the back tilted up? (Prevents steam burns on face and hands.)
5. When filling a pan with water for boiling, is it filled less than to the top? (A full pan will boil over and spatter.

B. Cuts

1. Are broken dishes and glasses promptly cleaned up and disposed of in special container provided?
2. Are knives stored in a slotted case?
3. Are knives left on the drain board to be washed, not dropped into the sink?
4. Is the can opener in good repair so it cuts sharply and leaves no ragged edges?
5. Are mixing bowls properly placed and beaters securely fastened before the mixer is started?
6. Is the mixer turned off before attempting to retrieve any article that has fallen into the bowl?
7. Is the proper knife used for a given job?
8. Is the worker's full attention given to the use and control of the knife?
9. Are knife edges sharp to require minimum effort and maximum control in use?
10. Is cutting done away from the body?
11. Is cutting always done on a cutting board?

Handout No. IIIa
(Page 2)

C. Electricity

1. Are electric cords in good repair?
2. Are sufficient outlets provided for the equipment in use?
3. Are hands always dry before touching electrical equipment?
4. If there is a fuse box, are there extra fuses in the fuse box?
5. Is the electricity on appliances always shut off before new fuses are installed or before the circuit beaker is returned to the "on" position?

D. Falls

1. Are spilled foods cleaned up immediately?
2. Are corridors and stairways free from debris?
3. Are articles placed on shelves securely so they will not jar off?
4. Are step ladders sturdy and in good repair?
5. Are brooms and mops put away properly after use and not left out against the wall or table to trip someone?
6. Are hallways well lighted and steps well marked so no one will trip?
7. Do all personnel walk and never run in the kitchen?

E. Storage

1. Are heavy materials stored on lower shelves and lighter materials on upper shelves?
2. Are items stored neatly, similar foods stored together; and cleaning materials stored away from food?
3. Are stored materials kept at least 18 inches away from light bulbs?
4. Are safe stepladders used to reach high shelves?
5. When lifting from low levels, are knees bent and backs straight? Is the load held close to the body? Is the load lifted by straightening the knees and raising to upright position?

GENERAL GUIDELINES FOR WORKING WITH EQUIPMENT

1. Good lighting, at least 30 footcandles (as measured by a light meter) in the work area, is essential.

2. Adequate ventilation (hood and filters) for all working equipment is important.

3. Have regular, detailed inspections made of all foodservice equipment to insure safe and efficient operation; inspections can be made by qualified equipment or utility people, and should be made at least prior to the start of each school year.

4. When working with hot pans, use dry potholders and make certain that space is available to place the hot pans which you are moving; be sure that the work area is clear of fellow employees before moving containers.

5. When working with heavy containers, ask for help, and know where the container may be safely placed.

6. Know the safety codes for electrical and gas equipment:

   a. All electrical equipment and connections must conform to the National Electrical Code requirements and other state and local requirements.

   b. All gas connections must conform to national, state, and local regulations.

   c. Electrical ranges and ovens should bear the seal of approval of the Underwriter's Laboratories; gas ranges and ovens should bear the seal of approval of the American Gas Association laboratories; both electric and gas ranges and ovens should meet the requirements of the National Sanitation Foundation.

7. CO_2 (carbon dioxide) or nontoxic chemical fire extinguishers, approved by state and localfire regulations, should be available near all cooking equipment; employees should know their locations and how to use them.

8. Know the procedures for the particular piece of equipment. Different makes and models and types of similar equipment may require different procedures. Do not use any equipment until you have received instructions in its use.

Handout No. IIIc

SAFETY PRECAUTIONS IN USING COMMERICAL COOKING EQUIPMENT

A. To use ranges safely, follow these precautions:

1. Let range cool before cleaning.
2. Never allow grease to accumulate in cracks of range, on drip trays, in vents, or on hoods (this is a fire hazard); grease also causes unpleasant odors and attracts roaches and mice.
3. Avoid unnecessary spillage on range top; if spillage occurs, wipe up immediately.
4. To prevent possible burns, do not allow pot handles to extend beyond the end of the range.
5. Cook in minimum amounts of water to prevent products from boiling over. This also reduces handling problems when pouring off hot liquids. In addition, it prevents loss of nutritive value.
6. Always keep oven doors closed when not in use.
7. Use cooking pots and pans of proper size to avoid boiling over.
8. Regulate heat as required to prevent boiling over of liquids.
9. If the pilot light on a gas range goes out because of a strong draft or spilled liquid, turn off gas immediately and wait before relighting.

B. To use ovens safely, follow these precautions:

1. Let oven cool before cleaning.
2. Never allow grease to accumulate in cracks of oven because this creates a fire hazard; grease also causes unpleasant odors and attracts roaches and mice.
3. Always keep oven doors closed when not in use.
4. Do not close door on gas models until gas is ignited.
5. Ventilate gas ovens before lighting.

C. To use convection ovens safely, follow the precautions for conventional range or deck ovens, and follow the procedures printed on the oven door.

D. To use a tilted braising pan safely, follow these precautions:

1. Guard against possible steam burns when raising kettle lid.
2. To prevent burns, use long-handled paddles, dippers, spatulas, and turners.
3. Wipe up any grease that may spatter on the floor when emptying the tilting braising pans.

E. To use steam kettle safely, follow these precautions:

1. Guard against possible steam burns when raising kettle lid.
2. See that proper water level is maintained in water jacket. If the water jacket has gone dry, do not add water to the jacket without first allowing it to cool.
3. Be certain that safety valve is in good working order.
4. If steam pressure rises above safety level, turn off and call reliable service person.
5. To prevent burns, use long-handled paddles for stirring and long-handled dippers for removing food.
6. Wipe up any grease that may spatter on floor when using the kettle.

F. To use steamer safely, follow these precautions:

1. Follow the instructions for the type of steamer.
2. Guard against possible steam burns when opening door.
3. If steam leaks around door after tightening, have steamer checked by reliable service person.
4. Be certain that safety valve is in good working order.
5. If steam pressure rises above safety level, shut off steam and call reliable service person.
6. Clean up spilled food immediately.
7. See that proper water level is maintained in self-steam generating nonpressure steamers.

Handout No. IIId

SAFETY PRECAUTIONS IN USING
COMMERCIAL FOOD PREPARATION EQUIPMENT

A. To use mixer safely, follow these precautions:

1. Be sure to have correct electrical connections grounded according to identification plate on mixer.
2. When cleaning mixer, do not let water come in contact with the motor or electrical wiring.
3. Select the correct bowl for type of mixture and then select correct beater or whip.
4. Be sure to fasten bowl and beater or whip securely before starting the motor.
5. Do not put hand or spoons into bowl while the mixer is in operation.
6. Stop machine before scraping side of bowl or loosening materials on the bottom during mixing process.
7. Always use a rubber scraper, flexible spatula or long-handled spoon to scrape sides of bowl and to remove food from beater or whip.
8. Use mixing bowls for mixing only; do not put them on the range or in the oven.
9. If the mixer is used on continuous basis, always allow time for motor to cool.

B. To use a vertical cutter mixer safely, follow these precautions:

1. The machine cannot be turned on when the lid is open, but the knives may continue to revolve after the machine is turned off. Do not open the lid until the knives have come to a full stop.
2. Always handle the knives carefully They are sharp!

C. To use a slicer safely, follow these precautions:

1. Always make certain the switch is off and the plug is pulled out of socket before cleaning.

2. Never use slicer when blade guard is off.

3. Always keep hands away from blade when machine is in operation; never catch food with hands.

4. Keep plug out of socket when machine is not in use. (Be certain guard is on slicer before putting plug in socket.)

5. When cleaning a slicer, do not let water come in contact with the motor or electrical wiring.

6. When disconnecting slicer, pull the plug; do not pull the cord.

7. Never use a metal instrument to scrape off food particles from slicer knife.

8. Make sure your hands are dry before operating the slicer.

9. Be sure cord is dry and free from grease.

10. Do not use very hot water or steam in cleaning slicer.

11. Keep blades sharpened according to manufacturer's instructions.

D. To use food chopper safely, follow these precautions:

1. Never put hands in bowl when chopper is in use.

2. Wait until knives have stopped revolving before removing food or cleaning.

3. Do not overload the bowl; fill no more than 2/3 full.

4. Use large spatula rather than your hand to guide food into cutter; move in direction opposite from bowl rotation.

5. Do not use for cutting meat with bones and gristle.

6. After cleaning, make sure knives are replaced in the proper position.

PERSONAL HEALTH HABITS

Personal hygiene means a clean body, clean clothes and clean habits. Many food illnesses can be traced to the people who handled the food.

A. Health Precautions:

1. A worker with an illness such as a cold, cough or infection, or other communicable disease, cuts or burns could easily contaminate food. If you are sick, do not go to work. If you have an open sore, boil or other skin eruption, advise your supervisor so you can be assigned to a non-food area.

2. A worker who has been exposed to an infectious disease should consult with a doctor before returning to work.

3. Some persons may appear healthy but still harbor bacteria that can contaminate food. These people are called "carriers." Carriers should not handle food, just as a person with a known, visible illness should not handle food. Health examinations can help determine if persons are "carriers" of communicable diseases such as typhoid.

B. Personal Cleanliness Habits:

1. Bathe daily. The skin harbors germs, and the pores trap them in. Wear clean underwear and work clothes.

2. Brush your teeth after eating.

3. Shampoo your hair as necessary to keep it clean and healthy. Wear hair in a simple, easy-to-manage style.

4. Keep fingernails clean, well-trimmed and free of nail polish.

5. Avoid excessive makeup and perfume.

6. Dress properly for the job. Change from your street clothes and wear a clean uniform or washable work clothes every day. If you wear an apron, change it when it gets soiled.

7. Wear clean, low-heeled, properly fitting shoes with nonskid soles (preferably uniform-type shoes). The heel and toe should be completely enclosed for sanitation and safety reasons. DO NOT WEAR TENNIS SHOES, BEDROOM SLIPPERS, OR SANDALS.

8. Wear a hairnet or cap which completely covers the hairline. Hair spray should not be used as a substitute for a hairnet. Avoid hairpins or barrettes (they might slip out). Men or boys with short hair should wear caps; if hair is long, they should also wear hairnets. Do not touch your hair while working.

9. Do not wear jewelry other than unadorned wedding bands. This is a precaution primarily for sanitary reasons, but it also protects the worker and the jewelry.

C. Other Basic and General Work Habits:

1. DO NOT SMOKE OR CHEW GUM in food storage, preparation, serving, dining or clean up areas.

2. DO NOT COUGH OR SNEEZE near food. This results in millions of germs contaminating food, work areas, equipment and co-workers. Use disposable tissues as needed and throw used ones away. Wash your hands after using a tissue. Do not carry used handkerchiefs or tissues in your pocket.

3. Do not use hairspray or file nails, apply makeup, or comb hair in foodservice areas.

4. Wash your hands:

   a. Before beginning work and before beginning each food handling operation.
   b. After visit to toilet (this is imperative).
   c. After touching face or hair.
   d. After handling non-food items.
   e. After smoking.

   Scrub one hand against the other; it gets the trapped dirt and grime out. Use handwashing basins rather than preparation or dishwashing sinks. Disposable towels should be supplied for drying hands. (Do not dry hands on dish towels, aprons or uniforms.) Turn off the water with the towel. As you wash, do not lean against the basin. You may transmit germs.

5. Obtain physical examinations as required.

6. In the event you must wipe perspiration from your face, use a paper towel, not a kitchen towel. Dispose of the towel and wash your hands.

OVERVIEW OF FOODBORNE ILLNESSES

TYPE OF ILLNESS	HOW DO PEOPLE BECOME INFECTED	FOODS ASSOCIATED WITH ILLNESS	PREVENTION
CHEMICAL	Eating food poisoned by chemicals: 1. Insecticides 2. Empty poison containers 3. Utensils containing soluble metals.	1. Any food accidentally poisoned. 2. Acid food in containers or utensils of soluble metal.	1. Carefully wash all fresh fruit and vegetables before using. 2. Keep all chemicals away from food. 3. Throw out chipped enamelware pans.
BACTERIAL			
1. Staphoccocus	1. Eating food infected by careless foodhandlers. 2. Coughing or sneezing around food. 3. Cuts.	Potentially hazardous food (those that are high in protein content): 1. Custard and cream dishes. 2. Meat dishes (especially ham, poultry and meat salads).	1. Wash hands before handling food. 2. Do not handle food unless you are free from infection. 3. Cook food thoroughly and serve or refrigerate immediately.
2. Botulism	Eating food containing poison from the bacteria.	Low-acid canned goods which are not processed properly (such as beans, corn, meat and fish).	1. Throw out canned foods in dented or bulging cans. 2. Do not use home processed canned goods.

Handout No. IIIf

TYPE OF ILLNESS	HOW DO PEOPLE BECOME INFECTED	FOODS ASSOCIATED WITH ILLNESS	PREVENTION
3. Salmonella	1. Eating improperly cooked foods which have been contaminated by the organism. 2. Contact with fecal material (often from rodents).	Foods high in protein content especially: 1. Meats 2. Poultry 3. Egg and egg products 4. Baked products with cream fillings.	1. Good personal habits of foodhandlers. 2. Cook foods thoroughly and serve or refrigerate immediately. 3. Sanitize cutting boards. Do not return cooked meat to board or container used before cooking.
4. Perfringens	Eating food contaminated by: 1. Food handlers. 2. Insects	Foods high in protein content especially: 1. Meat 2. Poultry 3. Sauces, soups, gravies made with meat and poultry.	1. Cook foods thoroughly and serve or refrigerate immediately. 2. Store dry foods in tightly covered containers. 3. Wash hands before handling food.
5. Streptococus	Eating foods contaminated by: 1. Coughing or sneezing 2. Dust, dirt from clothing, facility air.	Foods high in protein content, especially: 1. Milk, milk products 2. Egg products 3. Meats and poultry.	1. Wash hands before handling food. 2. Pasteurize milk must be used. 3. Cook foods thoroughly and immediately refrigerate or serve.

TYPE OF ILLNESS	HOW DO PEOPLE BECOME INFECTED	FOODS ASSOCIATED WITH ILLNESS	PREVENTION
6. Trichinosis	Eating pork products which are contaminated.	Pork and pork products.	1. Cook pork and pork products thoroughly (150°F or 65°C minimum in center). 2. Local, state, federal pork inspection is essential.
7. Tuberculosis	Eating food infected by food handlers who carry the disease	Foods high in milk or milk products.	1. Milk must be pasteurized. 2. All eating, drinking and cooking utensils must be sanitized. 3. Routine health exams for foodservice employees are essential.

REMEMBER: 1. Handle foods properly:

- a. Follow good personal hygiene habits.
- b. Be careful with all foods high in protein content.

2. Keep foods at proper temperature:

- a. Minimize the time that foods are in the temperature range of 45°F (7°C) to 140° (60°C).
- b. "Keep Foods Hot and Keep Foods Cold or Don't Keep Food at All."

Handout No. IIIg

SELF-INSPECTION CHECKLIST FOR FOOD STORAGE AREAS

Dry Storage

1. Are walls, ceilings and floors clean and vermin-proof ?
2. Are supplies stored on shelves or pallets 6-12 inches off the floor ?
3. Are food items stored separately from non-food items ?
4. Is trash kept in the storeroom ?
5. Are food items stored in the order which they appear on the inventory list ?
6. Are old stock items placed in front of new ones ?
7. Are heavier items on pallets or on the lowest shelf ?
8. Is food stored away from the wall one to two inches to provide for air circulation and to prevent contamination from moisture ?
9. Are all items labeled showing content, price and date ?
10. Are sack items stored in plastic or metal containers with tight fitting lids ?
11. Are foods that absorb odors stored away from foods that give off odors ?
12. Are mops, brooms, or wet dish towels not stored in the food storage room?
13. Are personal belongings such as coats, sweaters, or shoes not kept in the food storage room?
14. Are any pipes in the room free of dust and not leaking?
15. Are foods in storage dated and not kept beyond the recommended time?
16. Are food supplies inspected at least monthly for signs of infestation or mold ?
17. Are all locks on doors and windows secure ?
18. Is there a thermometer and is it between 50° F and 70° F (10° C to 21° C) ?
19. Is there a vent for air circulation ?

Handout No. IIIg
(Page 2)

Refrigerated Storage

1. Is there a thermometer and is it between 36°F and 40°F (2°C to 4°C) ?
2. Is the inside and outside cleaned once a week ?
3. Are _all_ items dated and used as soon as possible ?
4. Are cooked foods such as ground beef and dressing stored in pans not over three inches deep ?
5. Are shelves slatted or wired to allow for air circulation ?
6. Are all foods covered ?
7. Are foods refrigerated as soon as possible, even though they may be hot ? (If hot, the food should be stored in shallow containers).
8. Is the refrigerator defrosted before 1/4 inch of frost collects ?

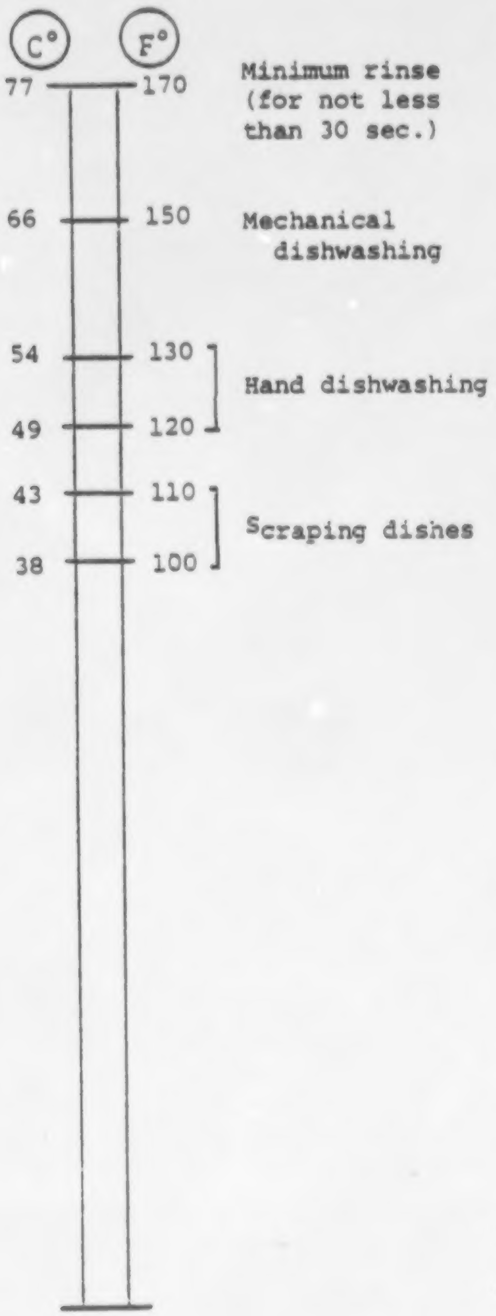
Freezer Storage

1. Is there a thermometer and is it between 0°F and 10°F (-18°C to 24°C) ?
2. Are frozen foods stored in the original shipping container ?
3. Are _all_ items labeled ? Are they used on a first-in, first-out basis ?
4. If small quantitites of left-overs are to be frozen, are they chilled promptly and thoroughly ? Are they packaged in moisture and vapor-proof material (freezer aluminum foil or polyethylene freezer bags) ?

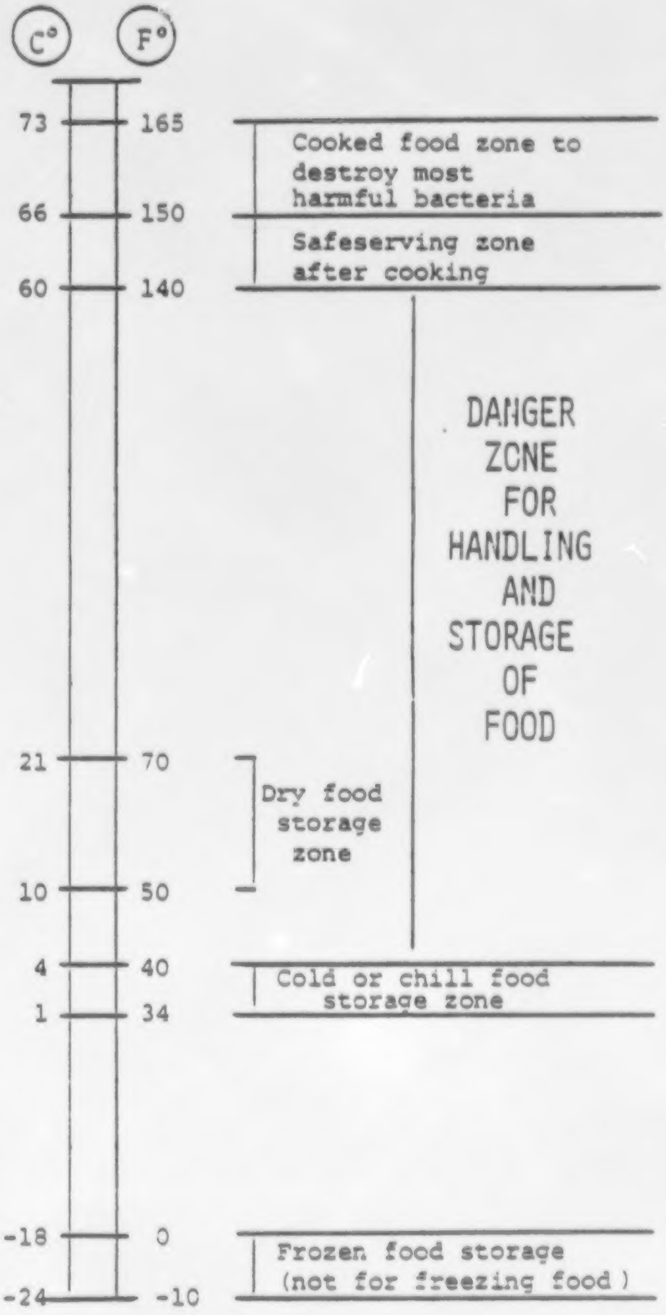
Handout No. IIIh

TEMPERATURES FOR FOOD SAFETY

Water Temperature for
Sanitizing Tableware
and Utensils.


C°
F°
77
170
Minimum rinse (for not less than 30 sec.)
66
150
Mechanical dishwashing
54
130
49
120
Hand dishwashing
43
110
38
100
Scraping dishes

Temperature of Food
for Safe Handling
and Storage.


C°
F°
73
165
Cooked food zone to destroy most harmful bacteria
66
150
Safeserving zone after cooking
60
140
DANGER ZONE FOR HANDLING AND STORAGE OF FOOD
21
70
Dry food storage zone
10
50
4
40
Cold or chill food storage zone
1
34
-18
0
Frozen food storage (not for freezing food)
-24
-10

Handout No. IIIi

GUIDELINES FOR FOOD STORAGE

FOOD	MAXIMUM TEMPERATURE (°F)	MAXIMUM STORAGE	
Canned items	70		12 months
Cooked dishes with egg, meat, milk, fish	36		Serve day prepared
Cream filled pastries	36		Serve day prepared
Dairy products:			
Milk	40	3 days	Original container
Milk (dried)	70	3 months	Original container
Butter	40	2 weeks	Waxed cartons
Cheese (hard)	40	6 months	Tightly wrapped
Cheese (soft)	40	7 days	Tightly covered container
Ice cream	10	3 months	Original container
Eggs	40	7 days	Unwashed, not in cardboard
Fish (fresh)	36	2 days	Loosely wrapped
Shellfish	36	5 days	Covered container
Frozen products:			
Fruits and vegetables	0 to 20	One growing season to another	Original container
Beef, poultry	"	6-12 months	Original container
Fresh pork	"	3-6 months	Original container
Lamb, veal	"	6-9 months	Original container
Sausage, ground meat, fish	"	1-3 months	Original container
Fruits:			
Peaches, plums, berries, apples	50	7 days	Unwashed
Pears, citrus	50 - 70	2 weeks	Original container

Handout No. IIIi
(Page 2)

Guidelines for food storage (Cont.)

FOOD	MAXIMUM TEMPERATURE (°F)	MAXIMUM STORAGE	
Leftovers	36	2 days	Covered container
Poultry	36	7 days	Loosely wrapped
Meat:			
Ground	38	2 days	Loosely wrapped
Fresh meat cuts	38	6 days	Loosely wrapped
Liver	38	2 days	Loosely wrapped
Cold cuts	38	6 days	Semi-moisture proof wrap
Cured bacon	38	1-4 weeks	May wrap tightly
Ham	38	1-6 weeks	May wrap tightly
Ham (canned)	38	6 weeks	Unopened original container
Dried beef	38	6 weeks	May wrap tightly
Vegetables:			
Leafy	45	7 days	Unwashed
Potatoes, onions, root vegetables	70	7-30 days	Dry in ventilated container or bag

CONSIDERATIONS WHEN LOCATING OR REMODELING A STOREROOM

1. Storeroom should be conveniently located to the place where food is received and should be next to the food preparation area.

2. Floors should be smooth, free from cracks and of slip-resistant material such as vinyl floorcovering.

3. Walls should be insulated to help maintain correct temperatures.
    a. Acceptable temperatures range from 50° to 70°F (10°C - 21°C).
    b. A reliable thermometer is essential to make sure proper temperatures are maintained.

4. Walls should be painted a light color and should be smooth, without seams or cracks and easy to clean.

5. Walls and floors should be free from openings where rodents or insects can enter.

6. There should be good lighting.

7. Natural ventilation can be achieved so as to allow:
    a. Fresh cool air to enter through louvers on doors at floor level.
    b. Warm air to escape through louvers on doors at the ceiling or roof level.

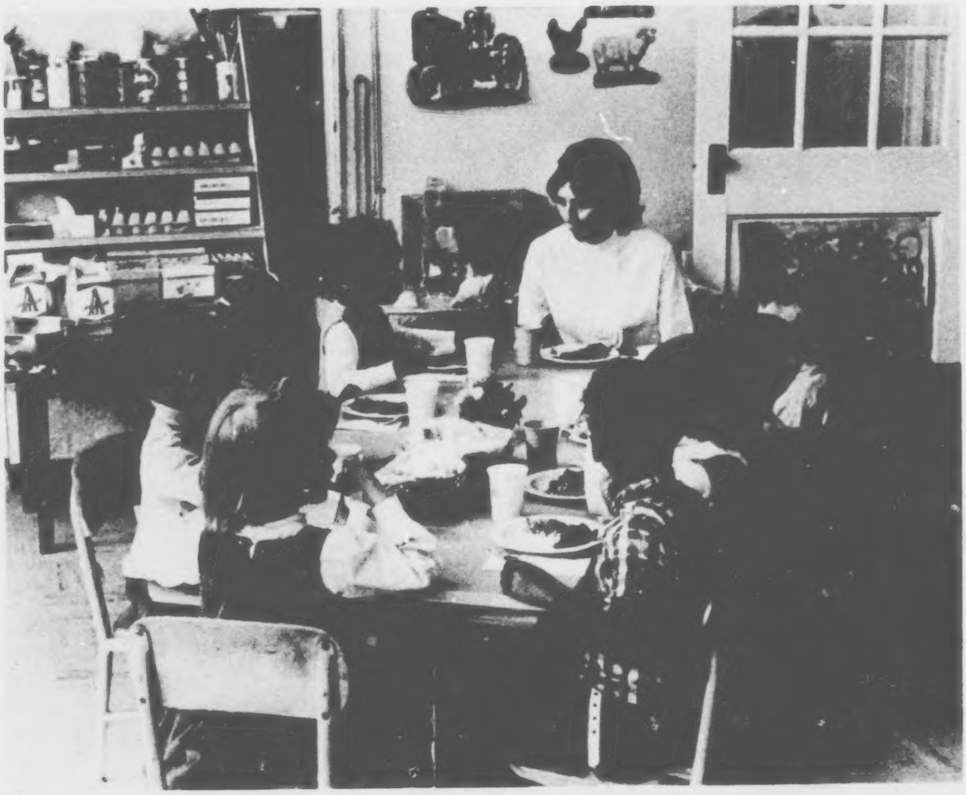
8. Ventilation is necessary for:
    a. Controlling the temperature and humidity.
    b. Hindering the growth of various types of bacteria and molds.
    c. Preventing mustiness and rusting of metal containers.
    d. Minimizing the caking of ground or powdered food.

KITCHEN SAFETY RULES

1. Walk, do not run, in all work areas, ramps, stairs. Take care when passing through swinging doors.
2. Remove from service any equipment which is broken or does not function.
3. Help new employees by showing them the correct and safe way to do the job.
4. Report every injury to your supervisor for first aid.
5. Dispose of all broken glass and china. Do not serve food in cracked or chipped glass or china.
6. Take sufficient time to serve properly. Too much haste will cause accidents.
7. Practical jokes on the job are forbidden.
8. Do not fight or argue with fellow employees.
9. Keep floors clean and dry, do not leave loose objects on the floor where they may be a hazard.
10. Do not overload your trays. Load your trays to give good balance.
11. Understand the safe way to perform any assigned task. If in doubt, ask your supervisor.
12. Report and take care of all unsafe conditions, broken tables or chairs, defective equipment, unsafe tools or knives, broken china or glass, torn carpeting, leaking radiations, etc.
13. Do not move heavy objects alone. Do not overlift. When lifting, keep your back straight, bend your knees and use your leg muscles.
14. Keep aisles, passageways, and stairways clean and free from obstructions. Wipe up any grease or wet spots immediately.
15. Use a ladder when reaching for high objects. Never overreach. Use care when reaching high.
16. Wear safe, sensible, and comfortable clothes for your work. Never wear thin-soled or broken-down shoes, never wear high heeled shoes on the job. Do not wear ragged or over-long sleeves which will catch in equipment.

SECTION TWO

THE TECHNICAL COMPETENCIES



SECTION TWO

THE TECHNICAL COMPETENCIES

The competencies needed to perform each step of quantity meal service from menu planning through production are included in the Technical Competencies. The steps in clean-up are included in Competency Area III - Sanitation and Safety, and considerations regarding the environment for meal time are included in Competency Area I - Nutrition and Feeding of Young Children. Competencies in Sanitation and Safety should be reviewed when training in Area VI - Food Receiving and Storage and Area VII - Food Production.

The Technical Competencies are organized into the four major tasks of quantity meal service:

IV - Menu Planning

V - Food Purchasing

VI - Food Receiving and Storage

VII- Food Production

Defining the Foodservice System

During the planning period before training, the Instructor should find out as much as possible about the existing foodservice system in the Trainees' programs, and the possibilities and probability of changes. Training should be geared to the existing way of doing things, with suggestions for improving the system limited to the kinds of changes that the foodservice workers have the authority to make. In many programs, the immediate supervisor of the cook has no training or experience in the management of a quantity meal service and has a very limited appreciation of the complexity of the operation. If this is the case the Instructor should, if possible, provide technical assistance or train the supervisor and other administrative and support staff from the program in the design of foodservice systems, pointing out some of the possible effects of their decisions on the foodservice workers.

The Technical Competencies were designed to provide a repertoire of procedures covering the tasks in which foodservice workers in different situations are likely to become involved.

Foodservice workers who are involved in purchasing, for example, may order through a purchasing agent in their agencies, and/or do their own ordering from one or more vendors, and/or shop at a grocery store or market. Some of them may buy food for more than one kitchen using the same or different menus.

The Instructions are designed to elicit information from the Trainee on what he thinks his role is and how it fits in with other tasks.

If the Trainee's perception is checked against the information previously obtained from the supervisor, the Instructor will have the information needed to train in specific tasks.

Training in the Technical Competencies

In contrast to the Foundation Competencies, which are essential for all foodservice workers, the Technical Competencies are more task and position-specific. In some programs, a cook may perform all of the functions in the foodservice operation and need to be proficient in all of the competencies -- in other programs personnel are more specialized. One-on-one training for specific tasks is recommended. This training can be carried out on the job by a supervisor or in small groups away from the job with each Trainee repeating the Instructor's demonstration in turn. Films which develop concepts and describe a series of operations are recommended when groups are to be trained, but the Instructor should not depend solely upon the films for demonstration. Discussions should be directed toward having Trainees explain a task after they have demonstrated one or watched a demonstration. In each of the competency areas, suggestions are made for the training aids which should be available for the use of Trainees. Trainees should be encouraged, as the Instructions suggest, to develop a file of easy-to-use reference materials such as free and low-cost government and trade publications. The Instructor should review the suggestions for materials in each competency area and select them in time for ordering if the Trainees do not already have them.

Organization of the Competency Area Units in Section Two

The Competency Area Units which follow are:

IV - Menu Planning

V - Food Purchasing

VI - Food Receiving and Storage

VII - Quantity Food Production

Each of the Competency Area Units contain several types of information:

- Introduction;
- Resource List;
- List of competencies and their related sub-competencies;

- Instructions and assessment for training in each sub-competency; and,

- Handouts which can be duplicated for Trainees.

The competencies and sub-competencies, instructions, and assessments in each area unit are logically related to each other and represent a complete set of competencies in the subject area relevant to food-service workers. The introductions and handouts supporting the instructions in each unit are not comprehensive because this material is meant to be supplemental to the existing resource material which is described in the unit. Since the availability of suitable resource materials for each unit varies, the scope and approach of the introductions and handouts vary also.

COMPETENCY AREA IV - MENU PLANNING

The key idea to be impressed upon trainees throughout the instruction in menu planning is the importance of menu planning -- the idea of developing a plan which can be followed and then following it. In one or two person foodservice operations particularly, where the lines of communication are short and uncomplicated, developing and following a written menu may seem unnecessary to the cooks. Before coming to the program, they may have prepared meals for large families and informal groups without written menus. A few of them may have had experience in commerical or other controlled quantity food production but were far removed from the planning process. Even though they may plan menus at the present time, they may not have had experience and guidance in developing a set of menus for more than one week at a time.

Child Care Food Program*

The Child Care Food Program meal pattern, which is a required standard for menu planning for participating programs, is an essential tool for the menu planner in a Child Care program. Evaluations of menus by a professional nutritionist or dietitian will ensure that the nutrients in all of the individual menu items chosen from each food group add up to the recommended daily allowance. Evaluation of menus by computer is available to Head Start programs in some areas through an affiliation with a state university nutrition department or extension service.

Competency Area III - Menu Planning deals with the basic abilities requisite to the menu planning process. First, the Trainee learns the basic meal pattern requirements. Into this basic pattern, he/she learns to select foods which are nutritious and appeal to children. The Trainee learns to select appropriate recipes and modify the menu to the needs of special children.

A successful menu depends upon an organized and efficient menu planning process. The next area of the unit deals with efficient organization of the Trainee's time and menu planning resources. The Trainee also learns techniques for developing his/her own resources.

A menu is only effective if it conforms to the given conditions of the program, the facility and the market. The Trainee next deals with the limitations of budget, staff, equipment, space, delivery or marketing schedules and storage limitations.

Recordkeeping is an important part of any foodservice program, and includes the keeping of menu records. Lastly, the Trainee will develop recordkeeping techniques.

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*Head Start programs are required to participate in the Child Care Food Program.

The development of good menu planning skills is crucial to the success of the entire program. It is particularly important to impress upon the Trainee that a successful program revolves around and results from a well-planned menu, and that foodservice personnel play a central role in this process.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for Trainees

USDA/FNS, Child Care Food Program Regulations - Meal Requirements (12)

USDA/FNS, A Planning Guide for Food Service in Child Care Centers, FNS-64 (10)

USDA/FNS, Quantity Recipes for Child Care Centers, FNS-86 (17)

USDA/FNS, Food Buying Guide for Child Care Centers, FNS-108 (13)

USDA/FNS, A Guide for Pre-Costing Food for School Food Service, PA 1185 (9)

A Calculator or Adding Machine

Visual Aids

Film: Feeding Your Young Children (36)

Film: Three Meals a Day (57)

Slides: Menu Planning for Child Care Programs (47)

U.S. Government Publications

HEW/OHDS, Nutrition - Better Eating for a Head Start (2)

COMPETENCY AREA IV - MENU PLANNING

COMPETENCY IV A: Plans menus based on a specified meal pattern and needs of children to be served.

1. Plans menus which follow the specified meal pattern.
2. Selects recipes which satisfy the meal pattern requirements for amount and type of food per serving.
3. Selects the kinds of foods that are appropriate for young children and for the cultural groups represented in the program.
4. Follows written instructions from nutritionist in modifying menu for children on special diets.

COMPETENCY IV B: Organizes an efficient menu planning process.

1. Develops a regular and efficient schedule for menu planning activities.
2. Organizes menu planning materials in appropriate place.
3. Develops and uses classified lists of menu items for planning variety in menus and for guidance in making substitutions on menus.
4. Develops cycle menus of appropriate length.
5. Develops sources of information on availability of foods.

COMPETENCY IV C: Plans menus which conform to given conditions of the program, the facility, and the market.

1. Plans menus which are within the budget.
2. Plans menus which can be prepared with available staff, equipment and space.
3. In planning menus, exhibits familiarity with types of food available on the market, and delivery or marketing schedule.
4. Precosts potential menu items for possible inclusion in menus.

COMPETENCY IV D: Maintains an accessible recordkeeping system for menus which meets program needs for planning, evaluation, and auditing.

1. Uses a standard form for recording menus as planned and for indicating substitutions.
2. Maintains a file for reference in menu planning of menus served, their acceptability, and cost.
3. Transfers menu record to the business office systematically or maintains the three year file for audit purposes.

COMPETENCY IV A

PLANS MENUS BASED ON A SPECIFIED MEAL PATTERN AND FOOD NEEDS OF CHILDREN TO BE SERVED

A1: Plans Menus Which Follow the Specified Meal Pattern

Instruction	Assessment
1.1 Study the required menu pattern (pp. 3-5, A Planning Guide). With the Instructor, plan a menu for one day, following the pattern.	1.1 Follows a specified pattern.

A2: Selects Recipes Which Follow the Specified Meal Patterns

Instruction	Assessment
2.1 Look at recipes which satisfy specific requirements for lunch or supper. Instructor will show and explain them on the blackboard or on a chart. Explain why they meet the requirement in your own words.	2.1 Explains how to choose recipes which satisfy the meal pattern requirements for amount and type of food.
2.2 From a set of tested quantity recipes, choose one each to meet the following meal pattern requirements: a. Meat alternate, 1 egg per serving b. Meat alternate, 1-1/2 oz. (35g) cheese per serving c. 1-1/2 oz. (42g) of cooked meat per serving d. 1-1/2 oz. (42g) of cooked chicken per serving e. 1-1/2 oz. (42g) of cooked fish per serving f. All or part of the meat or meat alternate requirement, and in the same recipe, all or part of the vegetable requirement for lunch or supper -- tell what amount and kind of other foods should be added to the lunch or supper menu to satisfy the complete meat/meat alternate and complete vegetable requirement.	2.2 Selects recipes which satisfy the meal pattern requirements for amount and type of food per serving.

A3: Selects the Kinds of Foods That Are Appropriate For Young Children and for the Cultural Groups Represented in the Program

	Instruction		Assessment
3.1	Describe the kinds of foods that appeal to young children. (See Handout IVa, Planning Meals for Children, and page 9 in *A Planning Guide for Food Service in Child Care Centers*, "Appetite Appeal" and "Suggested Finger Foods")	3.1	Selects foods that appeal to young children: a. Appeal to most children b. Easy to manage c. Attractive shape, texture, and color.
3.2	Look at Instructor-prepared charts and other lists (for example, p. 7, *A Planning Guide for Food Service in Child Care Centers*) of foods commonly served in child care programs which are good to rich sources of Vitamin A, Vitamin C, and Iron. Recall at least six items from each list. Tell how often these sources of Vitamin A, Vitamin C, and Iron should be served.	3.2	Identifies food commonly used in child care programs which are good to rich sources of Vitamin A, Vitamin C, and Iron. Identifies menu frequency guidance.
3.3	Using Handout IVb, Substitutions, match foods which are similar in nutritive value.	3.3	Makes substitutions for food of similar nutritive value.
3.4	Correct the menus on Handout IVc, Meals Need Variety.	3.4	Includes variety in flavor, color, texture, methods of preparation.
3.5	Collect ethnic recipes from parents in program or other sources which could be used to prepare menu items for the children's meals.	3.5	Selects menu items for the cultural groups represented in the program.

A4: Follows Written Instruction From Nutritionist in Modifying Menu for Children on Special Diets

	Instruction		Assessment
4.1	With the Instructor, discuss how to follow the nutritionist's instructions for common and easily managed menus or modifications to menus for children on special diets.	4.1	Explains how to follow written instructions of the nutritionist in preparing menu modifications for children on special diets.

Instruction	Assessment
4.2 Look at a set of specific instructions from a nutritionist and tell how to prepare the menu or the menu modification according to the instructions.	4.2 Using the specific written instructions from a nutritionist, follows a menu or modifies a menu for a child on a special diet.

COMPETENCY IV B

ORGANIZES AN EFFICIENT MENU PLANNING PROCESS

B1: Develops a Regular and Efficient Schedule for Menu Planning Activities

Instruction	Assessment
1.1 Discuss the menu planning process in your program with the Instructor. How often are menu planning sessions scheduled, and who participates? and/or Participate in and evaluate role playing to illustrate personnel and process in menu planning. (a) a menu planning conference which includes one or more parents and the foodservice staff; or (b) a meeting of the cook and a parent committee.	1.1 Identifies the tasks and personnel associated with the menu planning process, and recognizes the problems associated with scheduling menu planning.
1.2 Develop, defend, or revise the schedule for menu planning for your program.	1.2 Develops a regular and efficient schedule for menu planning which includes parent input.

B2: Organizes Menu Planning Materials in Appropriate Place

Instruction	Assessment
2.1 View the slide presentation 'Menu Planning for Child Care Programs." After discussing the slide presentation, collect all of the materials you need for menu planning or list them. Organize the materials or tell how you would organize them and where you would use them.	2.1 Keeps menu planning tools at one location (menu planning forms, inventory records, 'Menu-Master" lists of acceptable foods, menu file, price lists, cookbooks, quantity recipe cards, desk or table, and good light for writing).

B3: Develops and Uses Classified Lists of Menu Items for Planning Variety in Menus and for Guidance in Making Substitutions on Menus

Instruction	Assessment
3.1 Prepare a "Menu Master" as a ready reference for menu planning. Prepare lists of: a. Entrees. b. Vegetables and fruits high in Vitamin A. c. Vegetables and fruits high in Vitamin C. d. Various types of breads. e. Non-meat main dishes. f. Snacks. g. Simple desserts.	3.1 Prepares classified lists of menu items.
3.2 Write a weekly menu, including snacks, using the Menu Master. (Handouts IVd, Menu Evaluation Checklist for Child Care Centers, and IVe, Weekly Menu Planning Forms.)	3.2 Uses classified lists of menu items for planning variety in menus.
3.3 Using a weekly menu which you have developed, or one provided by the Instructor, make appropriate substitutions, one from each list of the Menu Master.	3.3 Uses classified lists of menu items for making substitutions in menus.

B4: Develops Cycle Menus of Appropriate Length

Instruction	Assessment
4.1 The Instructor will explain the use of cycle menus. With a partner, read and discuss Handout IVf, Cycle Menus.	4.1 Describes the advantages of using a cycle menu. Describes how to plan and use a cycle menu.
4.2 With a partner, plan a four-week cycle of main dishes by selecting a series of 20 meat/meat alternate items for lunch or supper. With a group and using a list of 20 meat/meat alternatives, complete the lunch menus for a four-week cycle.	4.2 Developes a cycle menu.

Instruction	Assessment
4.3 Discuss with the Instructor the advantages/disadvantages of a four-week cycle for your program and the advantages/disadvantages of a shorter/longer cycle for your program.	4.3 Determine the appropriate cycle length for a specific program.

B5: Develops Sources of Information on Availability of Foods

Instruction	Assessment
5.1 List the sources of information on foods which should be included in menu planning when they are available: a. Seasonal foods. b. Items that can be delivered. c. Items available in preferred market units. d. Items which are best buys, considering cost and quality.	5.1 Develops sources of information on availability of foods.

COMPETENCY IV C

PLANS MENUS WHICH CONFORM TO GIVEN CONDITIONS OF THE PROGRAM, THE FACILITY AND THE MARKET

C1: Plans Menus Which are Within the Budget

Instruction	Assessment
1.1 Given a weekly menu and a set of prices for food used, or a weekly menu for which the cost of food for each menu item is indicated, compute the following: a. The total cost of food used for the week. b. The average daily cost of food. c. The total cost of food used for each day. d. The difference (+ or -) between each day's food cost and the weekly average.	1.1 Computes: a. Total cost of food used each day. b. Average daily cost of food for a specific menu and an average daily cost of food.
1.2 From your own knowledge of food costs, suggest changes which will lower the food cost of the daily menu which you have found to be most costly of those above. Maintain the nutrient content and acceptability.	1.2 Adjusts menus to keep within cost limitations without reducing the nutrient content or acceptability of the menus.

C2: Plans Menus Which Can be Prepared with Available Staff, Equipment and Space

Instruction	Assessment
2.1 Describe the limitations of your staff, equipment and space for preparing meals. Compare these factors with others described by your training group and/or Instructor.	2.1 Describes the factors in staffing, equipment, and space which define the limits placed on choice of menu items and combinations of items.
2.2 From a set of menus provided by the Instructor or developed in your training group, rank the menus for ease of preparation within the limits of your staff, equipment and space. Tell why you ranked each menu as you did.	2.2 Selects menus which can be prepared with available staff, equipment and space.

Instruction	Assessment
2.3 Describe the possible effects on the menu of storage limitations such as a shared refrigerator, a small storage room, and/or vandalism/theft of stored food. Tell how you might adjust menus, deliveries or marketing to compensate for those limitations.	2.3 Recognizes storage limitations of the facility in planning menus.

C3: In Planning Menus, Exhibits Familiarity with Types of Food Available on the Market, and Delivery or Marketing Schedules

Instruction	Assessment
3.1 Name several meats, bread products, and fresh, frozen or canned fruits and vegetables that are available most of the time from your vendor or market, and tell how frequently each of these items appears on your menu.	3.1 Names the food in each category which are available on the market most of the time, and determines the frequency of each of the items on the menu.
3.2 Name the foods on your menu that the vendor or market is most frequently out of: a. When you order or shop for the food. b. When the order is delivered, and tell how frequently each of these items appears on your menu.	3.2 Names the food on the menu which are most frequently not available when orders are placed and/or deliveries are made, and determines the frequency of each of the items on the menu.
3.3 Name the menu items you would not include on your menu: a. On the day food is delivered. b. Four or more days after delivery, and give the reasons for your statements.	3.3 Identifies time for preparation and safe storage times in scheduling menu items in relation to food delivery schedules.

C4: Pre-Costs Potential Menu Items for Possible Inclusion in Menus

Instruction	Assessment
4.1 Review USDA, FNS Program Aid No. 1185, A Guide for Pre-costing Food for School Food Service.	4.1 Describes purpose and importance of menu pre-costing.

	Instruction		Assessment
4.2	Assemble materials for pre-costing the menu, including menu items to be pre-costed.	4.2	Identifies necessary materials for menu pre-costing.
4.3	Practice pre-costing menu items. Several samples may be done by the Instructor on a bulletin board first. Trainees may then work alone or in groups pre-costing menu items.	4.3	*Pre-costs menu items correctly per procedure described in FNS-1185.

*Some Trainees without adequate arithmetic background may not be able to succeed in pre-costing.

COMPETENCY IV D

MAINTAINS AN ACCESSIBLE RECORDKEEPING SYSTEM FOR MENUS WHICH MEETS PROGRAM NEEDS FOR PLANNING, EVALUATION AND AUDITING

D1: Uses a Standard Form for Recording Menus as Planned and for Recording Changes

Instruction	Assessment
1.1 When planning menus in any of the training activities, use a standard form.	1.1 Uses a standard form for recording menus as planned.
1.2 Demonstrate on a menu or on a form for "menu changes" how to show that an item was not served, how to write in the name of an item that was added or substituted and how to indicate the reasons for the changes. and/or Design a form for "menu changes" for a program with more than one kitchen or more than one place where substitutions can be made.	1.2 Uses a standard method for indicating changes in the menu at each site and the reasons for the changes.

D2: Maintains a File for Reference in Menu Planning of Menus Served, Their Acceptability and Cost

Instruction	Assessment
2.1 Discuss with the Instructor methods of collecting and using information about the acceptability of menu items and menus from observations of the staff, comments of children and parents, and plate waste.	2.1 Identifies methods of collecting and using information about the acceptability of menu items and menus.
2.2 Describe the staff responsibilities in your program for computing and recording the cost of each menu and/or the weekly/monthly cost of food used.	2.2 Describes roles of different staff members in computing and recording menu costs.

Instruction	Assessment
2.3 Set up or describe and evaluate an existing menu file that is accessible and useful to the menu planner using the following criteria: a. Copy of menu as planned for each cycle. b. Dates menu was served. c. Number of children and adults planned for and served at each meal. d. Substitutions noted on menu (or accompanying forms). e. Acceptability of menu items noted, and plate waste. - Unusual circumstances of the day. f. Raw food cost of daily menu.	2.3 Maintains a file for reference in menu planning of menus served, their acceptability and cost.
2.4 Discuss reasons for cost variations from one day to another.	2.4 Identifies differences in daily cost and problem of balancing expensive and inexpensive items on the menu.

D3: Transfers Menu Records to the Business Office Systematically or Maintains the Three-Year File for Audit Purposes

Instruction	Assessment
3.1 Describe the procedures used in your program for recording and placing menus as served in the three-year file for audit purposes. Compare your procedures with those described by the Instructor and/or members of your training group. Demonstrate how to change your system if necessary.	3.1 Describes, evaluates and, if necessary, modifies or recommends procedures for maintaining the three-year menu file for audit purposes.

PLANNING MEALS FOR CHILDREN

The key to healthy child development through good nutrition lies in careful menu planning. The menus must meet basic meal pattern requirements while taking into account children's food preferences. Carefully planned menus can provide nutritious meals that children can enjoy while teaching the fundamentals of good nutrition that will last a lifetime.

As far as official requirements go, the Head Start Performance Standards require that part-day programs provide 1/3 of daily nutritional needs, and that full-day programs provide 1/2 to 2/3 of daily nutritional needs. Additionally, children arriving in the morning that have not eaten breakfast should be offered one.

Menus should be planned around foods that children enjoy, and provide variety within those preferences to help them learn to like many foods. Include hot and cold foods with variety in colors, flavor, and texture; for example, raw and cooked vegetables and fruits. Periodically, menu items should be combined to make a familiar cultural or ethnic food, but be wary of seasonings. Children have more sensitive taste buds than adults, so foods do not need to be seasoned. In fact, salt can be omitted in recipes for children.

Children prefer meals with separate, distinct components rather than stews and other one dish meals. They will also be more receptive to foods in forms they can easily handle with fingers, fork, or spoon and especially meals they help prepare. Food should be soft, smooth, or crisp, not chewy or lumpy, and should be served lukewarm rather than very hot.

Limiting sugar in the children's menus can have the dual effect of promoting good dental health and the reduction of possible future weight problems. The use of full strength natural juices as opposed to fruit drinks and powders is required. A good source of Vitamin C chould be served every day, and a good Vitamin A source (dark yellow or leafy green vegetables) and a good source of iron should be included every other day.

Finally, plan menu cycles of three weeks or longer, but arrange the pattern so that the same meal does not occur on the same day each week or month. Likewise, the same foods can be combined differently or cooked differently on succeeding cycles to minimize repetition. Consider the season of the year and try to include simple surprises occasionally. Parent participation in the menu planning process often provides welcome new ideas, needed personal involvement, as well as a forum for nutrition education for parents. Good eating habits can only be maintained through reinforcement in the home.

After the menus are prepared, date and label them accurately. Send copies home, and post a copy in the dining area and one in the preparation area, where all changes should be noted. Changes are necessary due to food inventory fluctuations, weather and children's preferences. Children's food preferences must be considered when planning menus, for if the children do not eat the food prepared they will not obtain the nutrients they need. Check on their acceptance of food regularly, and adjust accordingly.

Handout No. IVb

SUBSTITUTIONS

Directions:

Some of the foods on your market order were not available. You will have to use what you have on hand. Column 1 on the left shows the foods that are missing, and column 3 on the right shows what you have on hand. Make substitutions in today's menu in column 2 by crossing off each item you cannot serve as planned and writing in the name of a new menu item on the line beside the one you crossed off.

1 Missing items	2 Today's Menu Substitutions	3 Food on hand:
	Breakfast	canned corn
Butter	Sliced peaches ________	corn muffin mix
Sliced peaches	Buttered grits ________	apple juice
Green beans	Milk ________	milk
Sliced bread		eggs
Cranberry juice	Snack	lard
	Cranberry juice ________	peanut butter
	Buttered toast ________	flour
		grape jelly
	Lunch	salt
	Baked liver ________	baking powder
	Buttered green beans ________	oatmeal
	Tomato wedge ________	brown sugar
	Sliced bread ________	canned peas
	Milk ________	apricot nectar
		margarine

Handout No. IVc

MEALS NEED VARIETY

Correct these menus to avoid:

a. The same foods on the same day each week

b. The same foods together in any meal

c. The same food twice in any meal

d. Food always prepared the same way

e. The same food served too often

In making substitutions, use menu items with similar cost and acceptance.

	WEEK 1	WEEK 2	WEEK 3
Monday	Hot Turkey on [illegible]un Spanish Green Beans Chilled Pears Milk	Tomato Soup Grilled Cheese Sandwiches Lime Gelatin with Pears Milk	Spaghetti with Meat Sauce Buttered Spinach Crispy Coleslaw with Apple Chunks Bread Sticks Milk
Tuesday	Fish Sticks with Tartar Sauce Mashed Potatoes Crisp Lettuce Salad Bread and Butter Milk	Fish Sticks with Tartar Sauce Hash Browns Lettuce Wedge Thousand Island Dressing Bread and Butter Milk	Oven Baked Chicken Cheesey Twice Baked Potatoes Roll and Butter Chilled Peaches Milk
Wednesday	Spaghetti with Meat Sauce Buttered Spinach Crispy Coleslaw with Apple Chunks Bread Sticks Applesauce Milk	Baked Ham with Cherry Sauce Mashed Potatoes Green Beans Rolls and Butter Milk	Hot Turkey on a Bun Spanish Green Beans Chilled Pears Milk

Handout No. IVc

ANSWER KEY
MEALS NEED VARIETY

Correction should be made to avoid:

a. The same foods on the same day each week.

   1) Fish sticks are served on Tuesday in weeks 1 and 2.

b. The same foods together in any meal.

   1) Monday menu in week 1 is exactly the same as Wednesday menu in week 3.

   2) Monday menu in week 3 is almost the same as Wednesday menu in week 1.

   3) On Tuesday and Wednesday in week 3, poultry and plain chilled fruit are served together.

c. The same food twice in any meal.

   1) On Tuesday menu, week 2, tartar sauce and thousand island dressing are too much alike.

   2) On Wednesday menu, week 1, apples are served in two different forms.

d. Food always prepared the same way.

   1) Fish sticks are served with a fried potato product twice in two weeks.

   2) Except for fresh apple chunks in the coleslaw, all of the fruit is chilled canned fruit.

e. The same food served too often.

   1) Pears are served three times in nine meals.

   2) Green beans are served three times in nine meals.

Handout No. IVd

MENU EVALUATION CHECKLIST FOR CHILD CARE CENTERS

This menu evaluation checksheet has been designed to be used by the Trainer in evaluating the menus planned by the Trainees. Less than twenty-one (21) "YES" answers indicate a sub-standard menu and the Trainee should repeat this unit of the program.

Questions with asterisks must be answered correctly, since these represent requirements specified in Government Regulations.

	YES	NO
1. Does the menu contain foods which are well liked by the children?	___	___
2. Does the menu contain all the recommended foods?*	___	___
3. Does the menu contain a good to excellent source of Vitamin C daily?	___	___
4. Does the menu contain a good to excellent source of Vitamin A and iron every other day?	___	___
5. Have the required serving sizes of food for the particular age group been followed as indicated in the menu?	___	___
6. Have hot and cold foods been included?	___	___
7. Is there a variety of colors?	___	___
8. Is there a variety of flavors?	___	___
9. Is there a variety of textures?	___	___
10. Is there diversity in taste?	___	___
11. Have raw and cooked fruits and vegetables been included in the menu?	___	___
12. Is there a good variety of different types of foods?	___	___
13. Are foods which are easily eaten by children included (i.e., finger foods)?	___	___
14. Are ethnic and cultural foods which are familiar to the children included in the menu? (If not applicable, answer YES.)	___	___
15. Is there at least one new food on the menu each week? (i.e., a food which is generally unfamiliar to a majority of the children)	___	___

Handout No. IVd
(Page 2)

	YES	NO
16. Are some foods included on the menu which the children will be able to help prepare and serve?	___	___
17. Has the skill of the cook, availability of recipes and available equipment been taken into consideration? (Ask Trainee specific questions about skills of cook, or if answer unknown, answer YES.)	___	___
18. Can the menu be prepared in a reasonable amount of time?	___	___
19. Does the menu make provision for use of donated commodities? (If not applicable, leave blank.)	___	___
20. Are seasonal foods included in the menu?	___	___
21. Are pies, cakes, sweet rolls, doughnuts and sugarcoated cereals absent from the menu?	___	___
22. Are special dietary products which have been artificially fortified to replace a natural food to meet standards absent from the menu?	___	___
23. Have full strength natural juices been included?*	___	___

Handout No. IVe

WEEKLY MENU

WEEK OF ____________

	BREAKFAST 1. Milk 3/4 cup 2. Fruit, Vegetable or Juice 1/2 cup 3. Enriched or whole grain cereal 1/2 cup or bread 1/2 slice	SUPPLEMENTAL FOODS 1. Milk, Fruit, Vegetable or Juice 1/2 cup 2. Enriched, whole grain bread 1/2 slice or cereal 1/3 cup		NOON MEAL 1. Milk 3/4 cup 2. Meat or alternate 1 1/2 cup 3. Vegetable } 1/2 cup total 4. Fruit or Vegetable } 5. Bread 1/2 slice
		Mid-Morning	Mid-Afternoon	
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				

CYCLE MENUS

A. Definition:

A cycle menu is a series of carefully planned menus used and repeated in order for a definite period or cycle of time. For example, a set of menus designed for three to six weeks is repeated several times before a new set is used.

B. The advantages of using a cycle menu are:

1. Menu writing time is reduced to one time per set of menus.
2. Records of food and labor costs from the first cycle in a season can be used to forecast costs for the next cycle.
3. Time scheduling for the first cycle can be repeated or easily corrected for the next cycle.
4. Staple items can be purchased for more than one cycle at a time.
5. Market orders developed for the first cycle in a season can be repeated.

C. When planning cycle menus:

1. Plan different cycles for different seasons of the year -- for example, three four-week cycles to give a twelve-week fall season, a twelve-week winter season, and a twelve-week spring season.
2. Note rich sources of Vitamin A, Vitamin C, and iron on the menu and develop a list of substitutions to be used when necessary.

D. When using cycle menus:

1. Make substitutions sparingly and wisely:
   a. to take advantage of specially priced foods
   b. in emergencies such as late deliveries
2. Note substitutions and reasons on the menu. Check the reasons later to see if adjustments are needed in the next cycle.

COMPETENCY AREA V - FOOD PURCHASING

Each foodservice worker/trainee's role in the area of food purchasing varies according to factors such as : (1) the size and type of operation; (2) the type of food purchasing system in effect; and (3) the experience and potential ability of the worker. Nevertheless, most people would agree that food purchasing is important in cost and quality control, and every foodservice worker's job can be enriched by participation in that control.

However, a food purchasing system to control costs and quality must first be developed by leaders of the foodservice/nutrition team -- i.e., by a qualified dietitian, nutritionist or foodservice manager. Only after a system is developed can the foodservice worker be trained to participate in the purchasing tasks by following established procedures. Of course, rising food costs, expanding programs, and ever-changing food purchasing alternatives make it necessary to evaluate and revise purchasing and other control systems. The foodservice worker may be called upon periodically to participate in the ongoing planning and evaluation of the system by providing accurate information on which decisions will be based.

Most Trainees will have had some experience in purchasing food. To supplement the content of this course, Instructors might capitalize on the relationship between quantity food purchasing and consumer education by encouraging Trainees to take advantage of continuing (consumer) education in this area. In addition to government publications for home and group purchasing, other resources might include the food section of the newspaper, selected radio and television presentations, consumer education programs by utility companies, Cooperative Extension, etc. Trainees' competency on the job will certainly be enhanced as they learn how to get more out of their food dollar at home.

In order to assist foodservice workers in developing the competency to purchase large quantities of food, systematic training must be provided by sensitive, patient Instructors. Trainees might have by-passed skills in arithmetic when they learned to purchase food by experience and intuition. The Instructions in this unit are presented so that the Instructor may limit or expand the skills in arithmetic required of Trainees and adjust the training program accordingly. The purchasing competencies are arranged to answer the questions:

- What to purchase ?
- How much to purchase ?
- From whom ? -- when ?
- How to purchase ?

An overview of Competency Area V may be presented to Trainees via the above questions on chalkboard or by referring to "Tips on Food Purchasing" on pp. 16-17 in A Planning Guide for Food Service in Child Care Centers, USDA/FNS-64.

This unit on food purchasing is a natural sequel to Menu Planning, Competency Area IV, and is closely related to Food Receiving and Storage, Competency Area VI. The Instructor might choose to develop some of the sub-competencies in Food Receiving and Storage along with the training in Food Purchasing.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for the Trainees

USDA/FNS, A Planning Guide for Food Service in Child Care Centers, FNS-64 (10)

USDA/FNS, A Guide for Pre-Costing Food for School Food Service, PA 1185 (9)

USDA/FNS, Food Purchasing Pointers for School Food Service, PA 1160 (17)

USDA/FNS, Food Buying Guide for Child Care Centers, FNS-108 (13)

USDA/FNS, Claim Forms and Reimbursement Worksheets (11)

USDA/AMS, How to Buy Series, Home and Garden Bulletins (18)

DOC/NMFS, Dougherty, J.B., Institutional Purchasing Specification for the Purchasing of Fresh, Frozen and Canned Fishery Products (22)

A Calculator or Adding Machine.

U.S. Government Publications

DOC/NMFS, Federal Inspection Marks for Fishery Products, FFF No. 550 (19)

DOC/NMFS, Cope, G., Fishery Inspection (20)

DOC/NMFS, Look for These Marks of Quality (Poster) (21)

American Hospital Association, Food Service Manual for Health Care Institutions (60)

Books

Kotschevar, L., Foodservice for the Extended Care Facility (65)

Stokes, J., Food Service in Industry and Institutions (76)

Van Egmond, D., School Foodservice (78)

West, B., Food Service in Institutions (80)

COMPETENCY AREA V - FOOD PURCHASING

COMPETENCY V A: Describes the established system for purchasing food and collects information for ongoing planning and evaluation of the system.

1. Identifies characteristics of the purchasing system currently in use.
2. Collects information for ongoing planning and evaluation of the set of procedures used for purchasing food.

COMPETENCY V B: Specifies food items needed to serve a planned menu.

1. Systematically classifies food items to be purchased.
2. Evaluates sources of information for food specifications.
3. Writes specifications for food items from a menu or transcribes accurately the food specifications written and approved for use in the program.

COMPETENCY V C: Calculates quantity of each food item needed to serve a specific number of meals.

1. Uses standard measures and equivalents to calculate or identify the number of purchase units of ready-to-serve menu items needed for a given number of portions of a specific size.
2. For single-ingredient menu items in which waste or shrinkage occurs during preparation, determines number of purchase units of raw food needed to serve a given number of portions of the required size.
3. Identifies or calculates the number of purchase units or storeroom units for each ingredient listed on a standardized recipe.
4. Calculates or identifies the quantity of each food item needed to serve a given menu to the average number of children and adults in attendance.

COMPETENCY V D: Participates in established procedures for preparing and placing orders and maintaining purchasing records for cost control and reporting.

1. Defines market order, quotation record, purchase order, invoice and cash receipt, and describes the function of each of these purchasing records.

2. Prepares market order.

3. Determines best buys.

4. Orders food according to established procedures.

5. Receives and signs invoices, delivery slips, charge account slips, and cash receipts for food purchases.

6. Maintains file of purchasing records and/or forwards specific records or data from records systematically to business office.

COMPETENCY V A

DESCRIBES THE ESTABLISHED SYSTEM FOR PURCHASING FOOD AND COLLECTS INFORMATION FOR ONGOING PLANNING AND EVALUATION OF THE SYSTEM

A1: Identifies Characteristics of the Purchasing System Currently in Use

Instruction	Assessment
1.1 View film on purchasing, or receive orientation from Instructor and discuss with staff from other programs the different ways that food is purchased for different types and sizes of foodservice operations. Identify decisions common to the planning process for any purchasing system: a. Identification of type and amount of food needed to meet menu requirements. b. Determination of storage, transportation and personnel constraints (for example, who can or should do the ordering, and how often?). c. Selection of vendors/markets for type and size of operation.	1.1 Compares different types of purchasing systems.
1.2 Using Handout Vc, describe all the tasks involved in purchasing food for your own program. Point out your own responsibilities and the responsibilities of other staff members.	1.2 Describes all the purchasing tasks in own program and the responsibilities of each staff member.

A2: Collects Information for Ongoing Planning and Evaluation of the Set of Procedures Used for Purchasing Food

Instruction	Assessment
2.1 Identify sources for small and large quantity food purchases and compare characteristics of each source; for example, a vendor in the area who will sell and deliver canned goods by the case versus a local supermarket where you can buy individual cans. Record the information on Handout Vd.	2.1 Identifies sources of supply for small and large quantity food purchases and compares characteristics of each source.

	Instruction		Assessment
2.2	Describe how to notice and report any practices or vendor uses which are unethical, such as bribes and short weights.	2.2	Notes and reports any practices of a vendor which are unethical.
2.3	Look at the storage areas in your facility for dry, refrigerated, and frozen storage. For each type of food to be stored, estimate how much could be delivered and stored safely and efficiently at one time and how often deliveries or pick-ups must be made from a vendor, market and/or your agency's central storage.	2.3	Collects information on storage areas and delivery or pick-up schedules for different kinds of foods that will permit safe and efficient storage of food at the facility.
2.4	For each type of food used, describe or find out how far ahead of the delivery or pick-up date orders must be placed, how frequently they are placed, and the usual size of the order.	2.4	Describes the schedule for ordering or shopping for each type of food and the usual size of the order.

COMPETENCY V B

SPECIFIES FOOD ITEMS NEEDED TO SERVE A PLANNED MENU

B1: Systematically Classifies Food Items to Be Purchased

	Instruction		Assessment
1.1	Review the classified food inventory list provided by your agency, delete items you will probably not purchase and add items, if necessary. or If your program does not provide a classified list for purchasing/inventory, use Handout Va to develop a classified list which will help you collect information for purchasing and inventory the same way every time, and the same way from every center.	1.1	Develops or modifies a classified food inventory list which fits the agency's system of purchasing and storing food.
1.2	From a menu, identify major ingredients needed. Use copies of Handout Vb to list the ingredients according to the categories of the classified list which you developed.	1.2	Identifies food items needed to serve a given menu and classifies them by type to facilitate record-keeping for purchasing/inventory.

B2: Evaluates Sources of Information for Food Specifications

	Instruction		Assessment
2.1	With the Instructor, look at a basic reference manual on written specifications for purchasing foods. Find out what kind of information is available in the manual. Use Food Purchasing Pointers for School Food Service or other reference manuals.	2.1	Exhibits familiarity with some basic references on written food specifications.

Instruction	Assessment
2.2 In the purchasing manual, look up several different food items to find out the kind of information to include in the specification for that kind of food, for example: name of item, a unit of purchase, quality (government or other grades, brand, etc.), the size of the item such as weight range, and descriptors such as "Blue Lake" green beans.	2.2 Describes the kind of information to be included in a specification for food items.
2.3 Look at some food specifications which have been written for your program, or at some specifications written by the Instructor, and compare them with information in the basic reference manual.	2.3 Compares specifications written for own or similar program with information in a basic reference manual.
2.4 Compare other sources of information on food specifications such as food vendors, educational television and radio, newspaper articles and advertisements, government publications, trade publications.	2.4 Compares several readily available sources of information on food specifications for utility and for congruence with basic references.

B3: Writes Specifications for Food Items From a Menu or Transcribes Accurately the Food Specifications Written and Approved for Use in the Program

Instruction	Assessment
3.1 Beside the name of each food item which you have listed on copies of Handout Vb (see Instruction V A1.2), write the specification, referring to a reference manual or to a selected list of specifications provided by the Instructor, or to the list of specifications developed and approved for use in your program.	3.1 Writes specifications for food items from a menu, or transcribes accurately the food specifications written and approved for use in the program.

COMPETENCY V C

CALCULATES QUANTITY OF EACH FOOD ITEM NEEDED TO SERVE A SPECIFIC NUMBER OF MEALS

C1: Uses Standard Measures and Equivalents to Calculate or Identify the Number of Purchase Units of Ready-to-Serve Menu Items Needed for a Given Number of Portions of a Specific Size

Instruction	Assessment
1.1 Name some of the frequently served items that require no preparation (for example, milk, canned fruit juice, sliced bread), and indicate for each item the required portion size for the age of the children in your center.	1.1 Demonstrates familiarity with sizes of required portions for ready-to-serve menu items.
1.2 With the Instructor, review the commonly used purchase units for ready-to-serve items and their equivalents. For example, see Card A8, "Equivalent Common Food Measures" and Card A9, "Common Can and Jar Sizes," Quantity Recipes for Child Care Centers, and/or participate in a storeroom inspection to determine size of purchase units and calculate or identify equivalents in larger/smaller units.	1.2 Demonstrates familiarity with sizes of commonly used purchase units and their equivalents in larger/smaller units.
1.3 Calculate or identify accurately the number of portions of each ready-to-serve item which can be obtained from the purchase units used at your center. For example, how many 4 oz. servings of fruit juice in a 46 fl. oz. can?	1.3 Calculates or identifies the number of servings per purchase unit of each ready-to-serve item commonly used.

C2: For Single-Ingredient Menu Items in Which Waste or Shrinkage Occurs During Preparation, Determines the Number of Purchase Units of Raw Food Needed to Serve a Given Number of Portions of the Required Size

	Instruction		Assessment
2.1	In a foods laboratory, or as you prepare a single-ingredient menu item on the job, weigh food items as purchased, and after preparing the items for serving. Compare weights of the same food prepared by different methods with weights "as purchased." For example, in a foods laboratory, weigh carrots, trim, cut into carrot sticks, and weigh again. Repeat the experiment with foods where the difference between "as purchased" and "edible portion" is caused by changes during cooking.	2.1	Demonstrates in preparing different foods a knowledge of the difference between "as purchased" and "edible portion" weights of foods.
2.2	Compare the results of your experiments in yields with the values in a USDA Buying Guide. Explain the differences, if any.	2.2	Points out variations in yields, causes of the variation, and the value of a buying guide showing average yields for standard grades of food items.
2.3	Demonstrate how to use the *Food Buying Guide for Child Care Centers* to look up the amount of food to purchase for a single-ingredient menu item to provide the following number of servings: a. 25 b. 50	2.3	Demonstrates the use of a buying guide to determine quantities to purchase.
2.4	If the average number of servings for your program is different from the quantities shown in the *Food Buying Guide for Child Care Centers*, use the factor method with the help of the Instructor (see Handout VIIb) to find out how much food to purchase for a single-ingredient menu item to produce the number of servings needed for your program.	2.4	Identifies or calculates number of purchase units needed for a given number of servings.

C3: Identifies or Calculates the Number of Purchase Units or Storeroom Units for Each Ingredient Listed on A Standardized Recipe

<table>
<tr><th></th><th>Instruction</th><th></th><th>Assessment</th></tr>
<tr><td>3.1</td><td>For a tested quantity recipe, point out the amount of each ingredient called for in the recipe and the unit of measure. For example, for the first two ingredients in recipe E2, "Egg Salad," Quantity Recipes for Child Care Centers, for 50 1/3 cup servings:
<table>
<tr><th>Ingredient</th><th>Quantity</th><th>Unit of Measure</th></tr>
<tr><td>hard-cooked eggs</td><td>50</td><td>by count</td></tr>
<tr><td>chopped celery</td><td>1 1/2</td><td>quarts</td></tr>
</table></td><td>3.1</td><td>Points out on a tested quantity recipe the amount of each ingredient called for and the unit of measure.</td></tr>
<tr><td>3.2</td><td>Identify the units of measure on several recipes which are the same as storeroom units, that is, the ingredients which are commonly stocked in bulk and withdrawn from stock in recipe units as needed, or whole cans or other whole purchase units which are called for in recipes.</td><td>3.2</td><td>Identifies units of measure on recipes which are the same as storeroom units.</td></tr>
<tr><td>3.3</td><td>Identify the units of measure on the recipe which must be translated to equivalent purchase units for the market order. For example, on recipe E2 (see Instruction 3.1 above), quarts of chopped celery must be translated to pounds of celery as purchased.</td><td>3.3</td><td>Describes the difference between recipe units of measure and purchase units.</td></tr>
<tr><td>3.4</td><td>For recipe units of measure which are not the same as purchase units, use the "Buying Guide for Selected Items" accompanying the recipe to find out the number of purchase units needed to produce the amount required for the recipe. For example, on the back of recipe card E-2 (see above), the "Buying Guide for Selected Items" indicates that 2 pounds 2 ounces celery is needed to produce that 1 1/2 quarts chopped celery called for in the recipe.</td><td>3.4</td><td>For recipe units of measure which are not the same as purchase units, uses the buying guide accompanying the recipe to identify the number of purchase units needed to produce the required number of recipe units.</td></tr>
</table>

Instruction	Assessment
3.5 Repeat the steps in 3.1-3.4 above with a recipe standardized for the number and size of servings used in your program. If a buying guide has not been included on the recipe or has not been adjusted to the correct number of servings, use the factor method with the help of the Instructor. See Handout VIIb and information from your records or a buying guide to find out the number of purchase units of each ingredient needed to produce the amount required for the recipe.	3.5 Identifies or calculates the number of purchase units or storeroom units for each ingredient on a standardized recipe.

C4: Calculates or Identifies the Quantity of Each Food Item Needed to Serve a Given Menu to the Average Number of Children and Adults in Attendance.

Instruction	Assessment
4.1 If correct records of food needed are available for menus used in your operation, identify from the records the quantities of each food item needed for repeating a menu.	4.1 From program records, identifies quantities of food needed to repeat a menu.
4.2 For a new menu, calculate the quantity of each food item needed to serve the average number of children and adults in attendance. Use recipes that have already been standardized for the correct number of servings, and consult buying guides when necessary.	4.2 For a new menu, calculates the quantity of each food item needed to serve the average number of children and adults in attendance.

COMPETENCY V D

PARTICIPATES IN ESTABLISHED PROCEDURES FOR PREPARING AND PLACING ORDERS AND MAINTAINING PURCHASING RECORDS FOR COST CONTROL AND REPORTING

D1: Defines Market Order, Quotation Record, Purchase Order, Invoice and Cash Receipt, and Describes the Function of Each of These Purchasing Records

Instruction	Assessment
1.1 Look at the food purchasing forms used in your agency and demonstrate how each one is to be filled out. Trace the route travelled by each form from the first to the last person who uses it.	1.1 Demonstrates how to fill out and transmit the food purchasing forms currently in use in own program.
1.2 Look at food purchasing forms, i.e., market orders, quotation records and purchasing orders from other sources. a. Handouts Vb, Needs List, Ve, Market Order/Quotation Record, and Vf, Purchase Order. b. Forms used by other programs. c. Suggested forms on pp. 13-20, Food Purchasing Pointers for School Food Service. Under the direction of the Instructor, compare the forms from other sources and your own forms and explain how each form can be used.	1.2 Compares types of purchasing forms from several sources, explains the purpose of each and the suitability for own program.

D2: Prepares Market Order

Instruction	Assessment
2.1 For centralized purchasing, assemble completed "Needs Lists" (Handout Vb) from all centers. Add up all of the food needed and enter the information onto the Market Order form, Handout Ve.	2.1 Enters information on food needed for menus onto Market Order forms.

Note: To purchase for only one center, leave out the intermediate step of making and assembling "Needs Lists", and write the Market Order directly from menus.

Instruction	Assessment
2.2 Look at the inventory records and/or check the food storage areas to find out how much of each item on the list of foods needed for menus is on hand. Enter the information in column (3b), "Amount on Hand", on the Market Order form, Handout Ve.	2.2 Inspects inventory records and checks food storage areas to determine amount of food on hand for planned menus and enters information on market order.
2.3 For each item of food needed for planned menus, subtract the amount on hand to find out how much to purchase for immediate needs. Enter the information in column (c) "Amount to Order", on the Market Order form, Handout Ve.	2.3 Subtract amount of food on hand from amount needed for menus to determine quantity of each item to purchase for immediate needs and enters information on market order.
2.4 Check inventory records and/or food storage areas to find out if stock usually ordered in bulk or by the case is low.	2.4 Checks level of stock normally on inventory.
2.5 Consult calendar, storage space, and the menus for the next purchasing period to determine amount to purchase to replenish stock normally on inventory. For example, if a food item is normally purchased by the case, plan to order one or more cases in time to replenish stock on hand if there is storage space and if the whole case can be used during the normal shelf life of the product and before the end of the program year. On the market orders, enter complete information on stock to be replenished: item (column 1), specifications (column 2), and amounts (columns 3a, b, and c).	2.5 Determines quantities to purchase to replenish stock normally on inventory, and enters information on market order.

D3: Determines Best Buys

	Instruction		Assessment
3.1	For the food to be ordered which is available from more than one source, telephone two or three vendors and ask for prices, or note the prices in newspaper advertisements for food to be purchased in grocery stores. Enter the prices for each vendor or grocery store in Columns (4), "Prices" on the Market Order/Quotation Record form, Handout Ve.	3.1	Telephones vendors for quotations or notes in advertisements for several grocery stores for food which is available from more than one source.
3.2	Compare prices on Quotation Record and place a check mark beside the lowest price. Discuss with the Instructor the other factors, such as vendor's delivery date or distances to grocery stores which are important to consider in deciding which vendor or store to purchase from. After weighing price against other factors in the discussion, circle the best buys on the Quotation Record.	3.2	Compares prices, considers other factors, and determines best buys.

D4: Orders Food According to Established Procedures

	Instruction		Assessment
4.1	Tell the Instructor how food is ordered in your program. Check this information against the tasks you have listed as staff responsibilities on Handout Vc, Staff Responsibilities for Ordering Food. See Instruction 1.2, Competency V B1 and add to or revise the information on the form, if necessary.	4.1	Describes the established procedures for ordering food.

Instruction	Assessment
4.2 Note: Choose the instructions(s) below which fit established procedures for ordering food. Or for managers who have a choice, you may train in several procedures. a. To place orders with vendors by telephone: On the Market Order/Quotation Record, Handout Ve, or your own form, circle the items to be purchased from each vendor and phone in the orders. Make substitutions only if authorized. b. To prepare purchase orders: From the list of foods to be purchased on the Market Order/Quotation Record, Handout Ve, or from your own market form, write a purchase order for each vendor which includes only the items to be purchased from that particular vendor. c. To send information to a purchasing agent: (1) Send the completed "Needs List," Handout Vb, if you do not maintain stock on hand. (2) If you have a storeroom, send a market order showing amounts needed on hand and to purchase. (Use Handout Ve, but eliminate the Quotation Record from the Market Order.) d. To purchase food in a grocery store or market: Take your market order to the grocery store or if purchasing only a few selected items at the store, take a shopping list prepared from your market order. Purchase the foods on the list. Make substitutions only if authorized.	4.2 Follows established procedures in placing orders with vendors, and/or preparing purchase orders and/or sending information to purchasing agent and/or purchasing food in grocery store or market.

D5: Receives and Signs Invoices, Delivery Slips, Charge Account Slips and/or Cash Receipts for Food Purchases

Instruction	Assessment
5.1 Show how to sign a vendor's invoice after accepting delivery of a food order. Explain the purpose of the signed invoice for cost control and reporting.	5.1 Demonstrates how to sign a vendor's invoice after accepting delivery of a food order.

Instruction	Assessment
5.2 If you purchase any food at a local grocery store or market, tell how you obtain a receipt for cash or a charge account slip. If the receipt or charge slip is not itemized, show how to match an itemized list of purchases to the individual prices on the cash register tape. Explain the purpose of the itemized receipt for cost control and reporting.	5.2 Demonstrates obtaining and signing itemized records of charge purchases or cash receipts from a grocery store or market.

D6: Maintains File of Purchasing Records and/or Forwards Specific Purchasing Records or Data From Records Systematically to Business Office

Instruction	Assessment
6.1 Tell the Instructor who keeps the purchasing records in your program. Check this information against the tasks you have listed as staff responsibilities on Handout Vc, Staff Responsibilities for Ordering Food. (See Instruction 1.2, Competency V B1) and add to or revise the information on the form, if necessary.	6.1 Describes the established procedure for maintaining the purchasing records.
6.2 Demonstrate your own duties in keeping the purchasing records. Show the Instructor the records you keep on file and explain what they are used for. Tell the Instructor which records you are responsible for sending to the business office.	6.2 Performs and explains assigned duties in maintaining records on file and in transmitting particular records to business office.
6.3 Demonstrate how you collect information from purchasing records and either: a. Use the information to fill out monthly CCFP Reimbursement Forms. or b. Forward the information to the business office.	6.3 Performs and explains assigned duty in collecting and recording data for CCFP Reimbursement Forms.

Handout No. Va

CATEGORIES OF FOOD ITEMS*

Instructions: Adapt the following list of categories to the way you purchase and store food. Delete, add, or combine categories in order to group foods together that you order or store together. Then, for each category, list all the food items you commonly purchase. This new classified list of foods which you have developed can be used by each person who lists or checks off food needed, food on hand, or food to purchase. This will make it easier to combine market orders and inventories from different centers. You can also compare orders and inventories from month to month more easily if you will use the list to organize your records on food items.

Bread

Baked Products

Cereal

Milk

Fresh Meats

Sausage Products

Meat Food Products

Cheese

Eggs and Eggs Products

Poultry

Meat Alternatives
(Beans, Peas, Peanut Butter, Fortified Macaroni, and TVP)

Fresh Vegetables and Fruits

Canned Vegetables and Fruits

Condiments
(Catsup, Mustard, Vinegar, etc.)

Cereal Products

Dairy Products

Fats and Oils

Flavoring

Flour

Herbs and Spices

Nuts

Pickle Products

Salad Dressings

Sugar, Syrup, and Honey

Miscellaneous Products

Frozen Vegetables and Fruits

Dehydrated Vegetables

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*Abstracted from Table of Contents of Food Purchasing Pointers for School Food Service PA-160. Items included in each of the above categories are described in this basic reference.

Handout No. Vb

NEEDS LIST

Instructions: Choose two categories from your classified list of foods and write the names of those categories in the narrow column on the left. From a menu, list in column 2 the items needed in each category. For each item you have listed, write the specifications in column 3, and the amount needed in column 4.

1 CATEGORY	2 ITEM	3 SPECIFICATIONS	4 AMOUNT

STAFF RESPONSIBILITIES FOR PURCHASING FOOD

Directions: Under "Task" list each task involved in purchasing food. Then for each task listed, place a check mark ( ) under the personnel responsible for the task.

TASK (List each one)	PERSONNEL RESPONSIBLE FOR TASK					
	My job title: ____	Nutritionist/ Dietitian	Head Start Director	Other personnel (specify job titles)		
				1.	2.	3.

Printed Resources for Clarificacion of Roles

Handbook for Head Start Nutrition Specialists

ASFSA competencies of foodservice personnel in School Food Service Journal, August 1978.

ACYF, "Competencies of Food Service Personnel in Head Start Programs"

Human Resources for Clarification of Roles

Personnel in other Head Start organizations

Dietitians/Nutritionists in Head Start, School Food Service and educational programs.

Handout No. Vc

SURVEY OF FOOD SOURCES

Instructions: List below all wholesale or retail companies which sell food to your program at this time. After checking a telephone directory add all other wholesale companies which might sell food to your porgram. Fill-in all columns for each company from your records or by telephone inquiry.

FOOD COMPANY AND REPRESENTATIVE	LOCATION AND PHONE	ORDER DAY(S)	PICK-UP OR DELIVERY DAY(S)	ITEMS AVAILABLE

Handout No. Vd

MARKET ORDER/QUOTATION RECORD

Food Category____________________ For Use on____________________ Delivery Date________________

(1)	(2)	(3)			(4)		
ITEM	SPECIFICATIONS	AMOUNT			PRICES		
		a. Needed	b. On Hand	c. To Order			

Handout No. Ve

INSTRUCTIONS:

1. At the top of the worksheet, fill in:
    - Food category for all items to be listed (for example, fresh fruits and vegetables)
    - For Use on what day or days?
    - Delivery Date
2. List in column (1) all items needed in the category. In addition to ingredients on the menu, remember to check inventory list for needed staples.
3. Write or transcribe specifications in column (2).
4. In column (3a) record amount needed; check inventory and record amount on hand, if any, in column (3b). Then substract amount on hand from amount needed to determine amount to order. Enter amount to order in column (3c).
5. Identify two or three vendors by placing their initials in the spaces at the top of column (4). Record their informal bids/quotations in the correct column.
6. Compare prices; consider other factors; and circle the best buy.
7. Place orders for best buys by telephone or by filling out and sending a Purchase Order to each vendor for the items to be supplied.

Handout No. Vf

PURCHASE ORDER

Instructions:

1. To write the Purchase Order:
   Compile information on quantities and items needed from market orders, obtain quotations from vendors and write a purchase order for each vendor which includes only the items to be purchased from that particular vendor.

2. To check in purchases:
   Under "quantity received" on this form and also on the vendor's invoice, enter the quantity of each item received.

PURCHASE ORDER

Req. No. ____________ Date: ____________

To: ____________ For: ____________

Address: ____________ Date Required: ____________

Ship to: ____________ How Ship: ____________

Address: ____________ Terms: ____________

Item	Quantity		Please Supply Items Listed Below	Unit	Price
	Ordered	Received			
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

IMPORTANT
OUR ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.
PLEASE NOTIFY US IMMEDIATELY IF YOU ARE UNABLE TO SHIP COMPLETE ORDER BY DATE SPECIFIED.

Please Send Copies of Your Invoice with Original Bill of Lading

Purchasing Agent

COMPETENCY AREA VI - RECEIVING AND STORAGE

In many programs, the receiving and storage of food is the weakest link in the chain of all of the interrelated tasks which must be performed in order to produce meals. The importance of these tasks cannot be overstressed. Many foodservice workers who are given responsibilities in this area are not given the guidance and support they need in order to perform effectively. In looking through a storeroom when visiting a center, you might find items on the shelf that are different from the ones ordered -- peaches in heavy syrup instead of the light syrup specified in the order, or two cases of peaches instead of the one ordered. Foodservice workers need training in checking deliveries against records, and they need to know what they can and should do about it when the delivered food is not as ordered.

Storage is another problem area. In many cases, the facility is inadequate and food is delivered every day. Where onsite storage is used, foodservice workers should be trained in maintaining inventory records and keeping order in storage areas. All workers should be trained in proper methods of storing different kinds of foods so that they will know how to protect the food when it is held for periods of time during production.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for Trainees

USDA/FNS, Food Storage Guide for Schools and Institutions, PA 403 (15)

USDA/AMS, How to Buy Series, Home and Garden Bulletins (18)

U.S. Government Publications

HEW/PHS, The Foodservice Sanitation Manual (6)

Books

West, B., et al., Food Service in Institutions (80)

COMPETENCY VI - FOOD RECEIVING AND STORAGE

COMPETENCY VI A: Checks food items against an invoice and market order at time of delivery and makes necessary adjustments.

1. In receiving food deliveries, identifies specific quality factors which must be checked upon receipt and notes any discrepancies in specifications or quantities.
2. Receives food systematically, noting discrepancies between food delivered, invoice or delivery slip, and purchase order or quotation sheet, and reporting differences according to an established procedure.
3. Checks delivery against market order and, if necessary, makes menu changes, reorders, or refuses items.

COMPETENCY VI B: Places food in storage properly and maintains control in storage areas.

1. Identifies the steps in moving specific types of food to storage or into production after the delivery is received and accepted.
2. Maintains order in storage areas.
3. Participates in security system for stored food.

COMPETENCY VI C: Maintains inventory records.

1. Explains the purpose and appropriate use of perpetual and physical inventory records.
2. Collects inventory data accurately on forms designed for the purpose.

COMPETENCY VI A

CHECKS FOOD ITEMS AGAINST AN INVOICE AND MARKET ORDER AT TIME OF DELIVERY AND MAKES NECESSARY ADJUSTMENTS

A1: In Receiving Food Deliveries, Identifies Specific Quality Factors Which Must Be Checked Upon Receipt and Notes Any Discrepancies in Specifications or Quantities

Instruction	Assessment
1.1 Describe what to look for in judging quality of different foods at delivery. Use USDA *How To Buy* series to look up information. For example, "How to Buy Potatoes," p. 9: "Potatoes of good quality are firm, well shaped, smooth, clean, with few eyes, free from large cuts, and should not be green, badly sprouted or shriveled."	1.1 Describes acceptable and unacceptable quality in the types of food purchased which must be checked upon receipt of foods.
1.2 Look at several items of varying quality. Tell which items to accept and which items to reject at delivery on the basis of quality. Explain why you would accept or reject each item.	1.2 Distinguishes between acceptable and unacceptable quality.
1.3 Check an actual delivery or a set of food items selected by the Instructor against a set of written specifications. Tell which items meet the specifications and which ones do not. Refer to Instructions for Competency V.	1.3 Checks food items against written specifications and identifies discrepancies.
1.4 Weigh, count or note volume of items delivered on one day, or do the same with a set of food items selected by the Instructor. Check your measurements against the quantities shown on a vendor's invoice or a delivery slip from your agency's central stores. Calculate the shortages or overages.	1.4 Checks weights and quantities of items delivered against invoice or delivery slip and calculates shortages or overages.
1.5 Review Handout IVa, Factors to Be Checked During Receiving. Answer Instructor's questions about what to look for in receiving each type of product.	1.5 For each type of food product, identifies key factors to check during receiving.

A2: Receives Food Systematically, Noting Discrepancies Between Food Delivered, Invoice or Delivery Slip, and Purchase Order or Quotation Sheet, and Reporting Differences According to An Established Procedure

Instruction	Assessment
2.1 Read and discuss Handout V1b, Receiving Food Systematically. Demonstrate to the Instructor how to receive different types of food using the tools and steps outlined in the Handout.	2.1 Demonstrates how to receive different types of foods.
2.2 Analyze, evaluate and, if necessary, correct the receiving procedures you have demonstrated. Follow these steps: a. Obtain a copy of the Task Analysis form (see Appendix A, p.173) to record your observations. b. Repeat the first step of your demonstration. c. Describe your first step to the Instructor. d. With the help of the Instructor, write the description of your first step on the Task Analysis form. e. Go on to the next step of your demonstration and repeat steps b, c and d. Continue through each step of one receiving task. f. Review your written Task Analysis with the Instructor, evaluate your procedures and revise them if necessary.	2.2 Analyzes, evaluates, and corrects procedures for receiving different types of food.
2.3 Demonstrate and describe the procedures which have been established in your agency for reporting discrepancies between food delivered, invoice or delivery slip, and purchase order or quotation sheet.	2.3 Demonstrates and describes established procedures for reporting discrepancies between food delivered, invoice or delivery slip, and purchase order or quotation sheet.

A3: Checks Delivery Against Market Order and, if Necessary, Makes Menu Changes, Reorders, or Refuses Items

	Instruction		Assessment
3.1	Check an actual delivery or a set of food items selected by the Instructor against a market order or purchase order. Calculate shortages and overages.	3.1	Checks delivery against market order or purchase order and calculates shortages and overages.
3.2	Demonstrate how to refuse items which have not been ordered.	3.2	Demonstrates how to refuse items which have not been ordered.
3.3	Describe your part in reordering items which were not delivered. Discuss with the Instructor what you would do if a new order from the same vendor could not be delivered in time.	3.3	Identifies procedures for reordering items which were not delivered and alternate procedures to reordering.
3.4	Describe the procedures usually used in your agency for making substitutions on menus when a delivery is short.	3.4	Identifies procedures for making menu substitutions when items on menu are not delivered.

COMPETENCY VI B

PLACES FOOD IN STORAGE PROPERLY AND MAINTAINS ORDER IN STORAGE AREAS

B1: Identifies the Steps in Moving Specific Types of Food to Storage or Into Production After the Delivery is Received and Accepted

	Instruction		Assessment
1.1	Demonstrate and explain the steps in placing specific types of food items into refrigerated or frozen storage. Refer to Competency III, Sanitation and Safety.	1.1	Places refrigerated or frozen foods into storage immediately, and places perishable foods into refrigeration immediately after delivery or preparation.
1.2	Demonstrate and explain the steps in placing specific types of food items into dry storage. For example, how are cases of cans placed into storage?	1.2	Removes unnecessary packaging and places non-perishable foods into storage in original containers or, if necessary, transfers to protective and/or smaller containers.
1.3	Tell which food items must be dated before they are stored. Show how to date the items.	1.3	Identifies food items to be dated before storage and dates the items.
1.4	List the pre-preparation steps before storage for certain types of food items. For example, which fresh produce used in your program is usually trimmed and/or washed before being placed in the refrigerator?	1.4	Identifies steps in preparation before storage for perishable foods.

B2: Maintains Order in Storage Areas

Instruction	Assessment
2.1 Show how you arrange foods in the dry, refrigerated and frozen storage areas to minimize handling and to insure rotation of stock. Describe the size of packages for storage, the arrangement of shelves and the arrangement of types of food on the shelves, how and where new stock is placed, what kind of containers are used if food is not stored in the original container, how the items are labeled, and how to avoid using food storage areas for non-food items.	2.1 Demonstrates organization of storage areas for ease of use, food safety, and stock control.

B3: Participates in Security System for Stored Food

Instruction	Assessment
3.1 State the security rules for the food storage areas during the time that the foodservice staff is on duty. If your program does not have rules, suggest a set of rules for protecting the stored food from contamination and guarding against losses. At a minimum, discuss these issues: a. Locks on food storage areas, and periods of time to be unlocked. b. Personnel authorized to enter storerooms or place or remove food from cabinets, refrigerator and freezer.	3.1 Identifies or suggests security rules for food storage areas during the time that the foodservice staff is on duty.
3.2 State the security precautions used to protect stored food from contamination and loss during the time that the foodservice staff is not on duty. At a minimum, discuss these issues: a. Locks on food storage areas. b. If applicable, problems in shared storage space.	3.2 Identifies security precautions used to protect stored food from contamination and loss during the time that the foodservice staff is not on duty.

COMPETENCY VI C

MAINTAINS INVENTORY RECORDS

C1: Explains the Purpose and Appropriate Use of Perpetual and Physical Inventory Records

Instruction	Assessment
1.1 Review Handout VIc and discuss.	1.1 Defines and explains the use of perpetual and physical inventory records.
1.2 With other staff, participate in two different role plays. For each role play, repeatedly remove different types and amounts of food from the storage room. In the first situation, do not keep a record of the type and amount of food removed. In the second, check off on the set of cards provided by the Instructor the amount of each food that was removed each time it was removed. Evaluate the role plays. Discuss the purpose of perpetual inventories in providing accurate and up-to-date records of food used for convenience in developing market orders and maintaining proper levels of stocks.	1.2 Explains use of perpetual inventory for convenience in developing market orders and maintaining proper levels of stock.
1.3 Discuss the purpose of checking perpetual inventory records against the physical inventory. Explain why there might be differences in the two records.	1.3 Explains use of perpetual inventory for stock control, to identify losses due to pilferage, waste, and spoilage.
1.4 Tell how often you take a physical inventory and what you do with it.	1.4 Explains how often a physical inventory should or must be taken, the value of an actual count and the use of the record in monitoring the food budget.

C2: Collects Inventory Data Accurately on Forms Designed for the Purpose

	Instruction		Assessment
2.1	Take a physical inventory of stock on hand by recording quantities of each item in stock against the classified list prepared under Competency V. Use Handout VId, Physical Inventory Form or other form.	2.1	Collects physical inventory data accurately.
2.2	Review different kinds of forms for perpetual inventories. Compare with the form you are now using (if you are already keeping a perpetual inventory). Discuss possibilities in using each form you review. For example, pictures vs. word labels, notebooks vs. card files, records for every item vs. records for selected items, etc.	2.2	Assesses different record-keeping forms for perpetual inventory.
2.3	If you are not keeping a perpetual inventory, set up a system for selected items, and maintain the inventory for one month. Check against your physical inventory for the month. Use Handout VIe, Perpetual/Physical Inventory Worksheet, or maintain the perpetual inventory you are now using and check against your physical inventory for one month.	2.3	Maintains an accurate perpetual inventory.

Handout No. VIa

FACTORS TO BE CHECKED DURING RECEIVING

A. Meal, poultry and fish products:

1. Is the weight correct?
2. Is the product the proper cut, grade, etc.?
3. Is there a meat inspection stamp?
4. Is there any sign of thawing in frozen products?
5. Is the meat fresh (check color, feel, odor, etc.)?
6. Was it delivered in a refrigerated truck? If not, don't accept it.

B. Eggs:

1. Was the correct number delivered?
2. Is the size correct? (must rely on specifications)
3. Is the USDA shield designating grade on the package?
4. Are the eggs fresh? (must rely on specifications)
5. Is the packaging clean?
6. Are eggs cracked?

C. Dairy Products:

1. Was the correct number of all items delivered?
2. Is the USDA shield designating grade on the package?
3. Are packages clean and free from cracks, leaks, etc.?
4. Are containers full?
5. Is there a code on the package to tell you when the item was processed?
6. Is the item fresh (check odor, color, texture, feel, taste)?

D. Fresh fruits and vegetables:

1. Is the net weight correct?
2. Is the count correct for items purchased in that manner (for example, oranges)?
3. Is the product of good color, maturity, freshness, crispness, and not damaged?

E. Frozen foods:

1. Is the net weight correct?
2. Is the quality, type of container and style (whole, sliced) what you have ordered?
3. Are the products still fully frozen when delivered? If frozen ground meat, for example, has started to thaw at the time of delivery, it should not be accepted.
4. Is the truck a freezer truck?

F. Canned goods:

1. Has the correct item been delivered (color, style of cut, size, etc.)?
2. Is the number delivered (number of cases and size of cans by weight) correct?
3. Is the grade correct?
4. Are cans clean and free from dents and bulges?

RECEIVING FOOD SYSTEMATICALLY

In order to get what your program is going to pay for it is important that a receiving system or procedure be established and followed. The system or procedure must include a responsible person who uses the right "tools" -- that is, information and equipment.

Tools required for correct receiving procedures at time of delivery are:

1. Accurate scales (these require periodic checking).
2. Written specifications of items purchased.
3. Purchase orders specify exact item ordered and amount.
4. Weight conversion charts (ounces to pounds, weight to volume, metric weights to pounds, etc.).
5. Accurate thermometer.
6. Hand trucks and cart for moving items.
7. A desk or shelf to write on.

Steps to be followed at time of delivery by one responsible person are:

1. Check food (perishable foods first) against quotation sheet or purchase order.
2. Count, measure, or weigh each item. Scales should be standard equipment in every receiving area.
3. Inspect and check each item for quality. Determine if specifications or standards are satisfied.
4. Check invoice for price. Does the unit price agree with the purchase order ? Check to see if extensions are correct.
5. Sign the delivery slip from the vendor only after making sure all goods ordered are received. Record weight, count and quality. Show shortages, errors, or returned items in writing.
6. Post receipt of food items on perpetual inventory as they are placed in storage.

Information to be put on the tag or marked on the outside of the case includes:

Date of receipt - Name of vendor - Description of food item -
Weight or count when received.

PERPETUAL AND PHYSICAL INVENTORIES

See also: West, et.al. Food Service in Institutions, pp. 508-512, and Food Purchasing Pointers for School Food Service, PA 1160, p. 19-25.

Inventories

Food inventories are essential in food services management because they provide a means of stock control that is as necessary as keeping financial records. Ongoing, accurate food supply records are a valuable aid in preventing shortages, minimizing food losses, and planning purchases.

There are two inventory methods which can be used:

- A Perpetual Inventory, which is a continual record, and
- A Physical Inventory, which is an actual count.

The Physical Inventory shows what is actually in stock at a given time whereas the Perpetual Inventory alerts the manager to changes in the flow of items from the time of pruchase until use. The Physical Inventory provides a check on the Perpetual Inventory.

Perpetual Inventory

Perpetual Inventory means keeping a continuing record of food purchased, in storage, and used. These inventory records are recommended for all items except perishable foods which are delivered and stored in the production area. A Physical Inventory taken at regular intervals is more realistic for perishables.

If kept up to date, this type of inventory record provides the following information on each item:

- date of purchase;
- vendor;
- brand purchase;
- price paid; and
- amount on hand.

The Perpetual Inventory serves not only as a guide for purchasing food but also as a check on irregularities such as pilferage or displacement of stock. In addition, it provides useful information on fast-moving, slow-moving, and unusable items.

Standard forms for Perpetual Inventory are available from suppliers, or the food service manager may design forms that are best for an individual foodservice operation. Handout VIe is a sample Perpetual Inventory worksheet.

As transactions occur, data should be recorded on the Perpetual Inventory worksheet for each type of product. This type of inventory requires time and strict supervision to be effective. If a Perpetual Inventory is not feasible, keep a daily storeroom issue record.

Perpetual Inventory records should be checked against the actual count of items in the storeroom periodically. The frequency should be that which offers the best control for the organization. The comparison of Perpetual Inventory records with Physical Inventory records will identify discrepancies between written ongoing records and actual counts.

Physical Inventory

A Physical Inventory is an actual count of all items in the storeroom. It should be taken of all perishable items such as milk, fruits, vegetables, bakery products, etc., before writing market orders.

The storeroom, storage areas, freezers, and refrigerators should be organized with inventory recording in mind. Some suggestions are:

- Keep food of one kind together;
- Keep areas in an orderly manner;
- Label "empty" and "full" weight on each container used to store products such as flour, cornmeal, and sugar;
- Record date food is received; and
- Use food on a first-in/first-out basis.

A well designed form will help make the job of taking the Physical Inventory easier. A suggested form is in Handout No. VId. It may be helpful in designing your own forms.

Handout VId

PHYSICAL INVENTORY

FOOD ITEM AND DESCRIPTION	AMOUNT ON HAND				
	Unit______	Date_____	Date____	Date ____	Date ____

Handout No. VIe

PERPETUAL/PHYSICAL INVENTORY WORKSHEET

Item ______________________________ Month of ______________

Specifications ____

Unit of Purchase ____

Unit of Issue (out of storeroom) ____________________________

DATE	NUMBER IN (+)	NUMBER OUT (-)	BALANCE ON HAND	DATE	NUMBER IN (+)	NUMBER OUT (-)	BALANCE ON HAND

END-OF-MONTH (EOM) PHYSICAL INVENTORY

COMPETENCY AREA VII - QUANTITY FOOD PRODUCTION

The competencies in Area VII, Quantity Food Production, are grouped into those required for planning and pre-preparation, those involved in actual production, and those which are used in evaluating the products. This classification will be useful in helping Trainees develop planning skills. All Trainees need to be aware of the steps to be undertaken in planning, the importance of planning and how to follow a plan. Trainees who are also in training in the other competencies should use the menus which they have prepared earlier in planning food production.

If this training is given on the job, there should be some time away from the job for demonstrating specific techniques in which the Trainee seems to need retraining. Most Trainees will be experienced in food preparation, but in some cases may not be performing operations correctly.

Recognizing quality of the finished products is one of the most important competencies and one of the most enjoyable to teach. During the pilot test of these training materials, Trainees enjoyed evaluating each other's products and were delighted to find out ways of improving their products by adjusting their procedures.

A list of resources for this unit is provided below; each reference is followed by a number in parenthesis which refers to the more complete description of the resource in Appendix B.

Learning Aids for Trainees

USDA/FNS, Quantity Recipes for Child Care Centers, FNS-86, (17)

USDA/FNS, A Planning Guide for Food Service in Child Care Centers, FNS-64 (10)

American Home Economics Association, Handbook of Food Preparation (31)

USDA/FNS, A Guide for Pre-Costing Food for School Food Service, PA 1185 (9)

A Calculator or Adding Machine

Visual Aids

Film: Fast Sandwich Making (35)

Film: Cold Food Handling (33)

Film: Methods of Meat Cookery (48)

Transparencies: Interpreting a Recipe (Measurement techniques; standardizing recipes) (39)

Film: Foodborne Illness: Cause and Prevention (37)

Films: Kitchen Safety (41-45)

Film: Sanitation: Rules Make Sense (53)

Film: Sanitation: Why All the Fuss (54)

Books

West, B., et al., Food for Fifty (79)

Kotschevar, L., Foodservice for the Extended Care Facility, Cooking temperatures for Meats, p. 245 (65)

Kotschevar, L., Quantity Food Production (66)

Van Egmond, D., School Foodservice, Cooking terms, pp. 190-192; principles of quantity food preparation, pp. 194-215 (78)

Other Publications

American Dietetic Association, Standardizing Recipes for Institutional Use (29)

American Home Economics Association, Handbook of Food Preparation (31)

COMPETENCY AREA VII - QUANTITY FOOD PRODUCTION

COMPETENCY VII A: Plans and prepares for quantity food production.

1. Develops standardized recipes for use in own foodservice.
2. Estimates number of children and adults to be served for each meal.
3. Schedules food production.
4. Develops routines for efficient food production.

COMPETENCY VII B: Uses correct procedures in quantity food production.

1. Demonstrates knowledge of recipe terminology.
2. Selects or adjusts recipe for correct number of servings.
3. Selects and uses equipment and utensils correctly.
4. Measures ingredients accurately.
5. Demonstrates knowledge of basic methods of cookery and other food preparation processes in the production of meals for young children.
6. Demonstrates skill in basic methods of cookery and other food preparation processes in the production of meals for young children.
7. Follows established schedule and uses efficient routines in food production.

COMPETENCY VII C: Serves finished products of consistently high quality.

1. Recognizes quality of the finished product.
2. Assesses own procedures in food production and modifies if necessary to improve finished products.

COMPETENCY VII A

PLANS AND PREPARES FOR QUANTITY FOOD PRODUCTION

A1: Develops standardized recipes for use in own foodservice

	Instruction		Assessment
1.1	Review Handout VIIa with the Instructor. Define "Standardized Recipe," "Tested Quantity Recipe," and tell the advantages of using standardized recipes.	1.1	Defines "Standardized Recipe" and "Tested Quantity Recipe," and describes the advantages of using standardized recipes.
1.2	Discuss how seasonings (salt, sugar, spices) should be modified for preschool children. Modify one recipe.	1.2	Describe and demonstrate modification of recipe to reduce or eliminate seasonings for preschool children.
1.3	Choose a tested quantity recipe that you have not prepared before, and standardize the recipe for use in your program. Follow the instructions on Handout VIIa, Standardized Recipes, and refer to Handout VIIb, Adjusting the Number of Servings.	1.3	Develops a standardized recipe for own foodservice from a tested quantity recipe.

A2: Estimates number of children and adults to be served at each meal

	Instruction		Assessment
2.1	Discuss with the Instructor the fluctuations in the meal count from one time to another, and tell how you know.	2.1	Is aware of fluctuations in numbers of meals served from one time to another and identifies records used for evidence.
2.2	Keep a record of the number of children and adults served at each meal for one month. Use the form provided by your agency.	2.2	Keeps accurate meal census record.
2.3	Review the record of meals served for one month to see if there is a pattern in numbers served on different days of the week and for different meals. For example, find out if there are usually more children eating breakfast on one particular day of the week.	2.3	Recognizes pattern of meals served by meal and by day of the week.

	Instruction		Assessment
2.4	For the next special meal on the program calendar, tell how many children and adults you expect to serve. How do you know? Estimate the number of children who will be absent in different kinds of weather.	2.4	Estimates the effect of specific special events and weather conditions on attendance.
2.5	Estimate the number of children and adults to be served at each meal for the next week. Explain the factors you consider in making your estimates.	2.5	Develops a weekly estimate of the number of children and adults to be served at each meal.
2.6	Using the morning attendance report, show how you would adjust your earlier estimates for each meal to be served that day. Tell how far ahead of meal time you would need information on attendance in order to make adjustments in the amount of food to prepare.	2.6	Demonstrates and explains how to make daily adjustments in number of meals to prepare.

A3: Schedules food production

	Instruction		Assessment
3.1	From a list of menu items and for the number of servings selected by the Instructor, describe the steps in preparing each item, including the type and size of equipment for each step.	3.1	Plans for the equipment and procedures to be followed in preparing individual menu items for a given number of servings.
3.2	Choose one menu item for which you have described the steps in preparation, and estimate the time required for each step in preparing for different quantities. For example, estimate times for 25, 50, and 100 servings. In making your estimates, describe the type and size of equipment for the specific number of servings.	3.2	Estimates times and describes equipment for each step in the preparation of a given number of servings of individual menu items.
3.3	From the Instructor's list of menu items, tell which steps in the preparation of each must be scheduled early in the day or the day before serving, and which steps can be scheduled early without affecting the quality of the finished product.	3.3	Plans for early scheduling of steps in food production when holding is either essential or does not make a difference in the quality of the finished product.
3.4	Develop a schedule for a week for a given set of menus, staffing patterns, facility, and numbers of children and adults to be served.	3.4	Schedules food production for one week for a given set of conditions.

A4: Develops routines for efficient food production

	Instruction		Assessment
4.1	Review basic rules for efficient food production. Give examples to illustrate the following points: Planning: a. checking assignment and planning steps and sequence of operations to keep within time limits. b. using proper equipment, assembling equipment before beginning work, arranging for minimum movement of workers, and using power equipment whenever possible. Production: a. using smooth, continuous, rhythmic motions, completing one step at a time. b. organizing working materials and collecting soiled equipment on trays or carts to eliminate steps and keep the work area clean. (See West, et al., Food Service in Institutions pages 212-3 for a discussion of these rules.)	4.1	Presents examples of efficient routines and identifies the principles upon which the routines are based.
4.2	Evaluate some of your own procedures in preparing a meal and suggest new routines which would make food production more efficient.	4.2	Evaluates own procedures in food production and develops new routines to increase efficiency.

COMPETENCY VII B

USES CORRECT PROCEDURES IN QUANTITY FOOD PRODUCTION

B1: Demonstrates knowledge of recipe terminology

Instruction	Assessment
1.1 Develop a glossary of recipe terms and their definitions from your own knowledge. Check with cook books and Handbook of Food Preparation, pages 5-10, for other commonly used terms to add to your list.	1.1 Identifies terms commonly used in recipes.
1.2 Without looking at the glossary you have developed, define recipe terms selected by the Instructor.	1.2 Defines recipe terms.

B2: Chooses or adjusts recipes for correct number of servings of a given size

Instruction	Assessment
2.1 For several tested quantity recipes chosen from the Instructor's file, identify the number and size of servings for which each recipe was developed. If the recipe was developed for more than one quantity, tell how many servings each quantity will yield.	2.1 Identifies number and size of servings from individual quantity recipe cards or sheets.
2.2 Using a tested quantity recipe which was developed for 25 and 50 child sized servings, calculate the amount of each ingredient needed to prepare several different quantities. For example, adjust the recipe for: a. 30 child-size servings b. 75 child-size servings (See Handout VIIb, Adjusting Number of Servings.)	2.2 Adjusts recipes for different numbers of servings of a given size.
2.3 For the meat/meat alternative requirement, assuming one adult serving equal to two servings for a 3 to 6 year old child, calculate the equivalent number of child-size servings for different combinations of children and adults. For example, calculate the number of child-size servings to plan for when you expect to serve: a. 22 children and 3 adults b. 60 children and 6 adults	2.3 Calculates equivalent standard size servings for recipes to serve a given number of children and adults.

Instruction	Assessment
2.4 Discuss with the Instructor the factors you would consider in choosing how many extra servings you might plan for. Choose several different types of menu items and discuss the following factors: a. previous experience with general acceptability of that item. b. numbers of children usually eating more than/less than average portion. c. cost and ease of preparing larger quantity. d. other items on the menu. e. type of item (entree, vegetable, bread).	2.4 Determines factors to be considered in planning for extra servings.
B3: Selects and uses equipment and utensils correctly	
3.1 Using quantity recipes selected by the Instructor, assemble all of the utensils for each recipe at the place in the kitchen where they would be first used, or perform the same exercise with pictures of the utensils on a chart, blackboard, or flannelboard.	3.1 Selects correct utensils for the job.
3.2 Demonstrate and discuss the use of the utensils you assembled for the previous exercise. For example, show how to use each type of knife, and explain why.	3.2 Demonstrates and explains the use of basic utensils used in quantity food production.
3.3 For each piece of heated cooking equipment in your kitchen (ranges, ovens, broilers, steam equipment, etc.), cite the capacity and safety precautions, demonstrate how to operate the equipment, and explain the reasons for the procedures you are demonstrating.	3.3 Cites capacity and safety precautions, demonstrates and explains the use of basic items of heated cooking equipment.
3.4 For each piece of power-operated food production equipment in your kitchen (mixers, choppers, slicers, etc.) cite the capacity and safety precautions. Demonstrate how to operate the equipment, and explain the reasons for the procedures you are demonstrating.	3.4 Cites capacity and safety precautions, demonstrates and explains the use of basic items of power-operated food production equipment.

B4: Measures ingredients accurately

Instruction	Assessment
4.1 Review the two systems of measurement now in use in quantity food production, (1) the standard United States units, and (2) the metric system. For each system, know the commonly used units of volume and weight and their equivalents within the same system (for example 16 oz = 1 lb.). Table of equivalents, page 13, *Handbook of Food Preparation*; and metric system tables in dictionaries.	4.1 Cites the units of measurement commonly used in quantity food production in (1) standard United States units, and (2) metric units, and equivalents within the same system.
4.2 Look at sets of utensils for measuring ingredients by volume, tell what the total volume of each is, what portions of the total are marked on each container, and what types of foods should be measured in each. Do this with metric measuring utensils and again with standard U.S. measuring utensils.	4.2 Recognizes volume measuring utensils appropriate for different types of food, and identifies total and partial quantities for each utensil. Demonstrate with metric measuring utensils and with standard U.S. measuring utensils.
4.3 After a demonstration by the Instructor, demonstrate the use of the scales in weighing different quantities of flour, different quantities of fat. Use one measuring system and then the other.	4.3 Weighs different quantities of dry ingredients accurately, using one measuring system, and then the other.
4.4 Measure different volumes of water, flour, and fat in the amounts commonly found in quantity recipes, using one measuring system and then the other.	4.4 Measures different quantities of dry and liquid ingredients accurately, using one measuring system, and then the other.

B5: Demonstrates knowledge of basic methods of cookery and other processes of food preparation in the production of meals for young children

	Instruction		Assessment
5.1	Watch demonstrations or films on basic methods of cookery and other processes of food preparation. Discuss with the Instructor your own knowledge and use of these methods as they apply to the types of menu items used in your program.	5.1	Identifies basic methods of cookery and other processes of food preparation suitable for program, and evaluates own knowledge of methods
5.2	Read, discuss, and answer questions on each of the food preparation handouts: VIIc, Meat Cookery VIId, Preparing Vegetables and Fruits VIIe, Baking Breads and Cooking Grains VIIf, Poultry Cookery VIIg, Meat and Poultry Products Commonly Used in Child Nutrition Programs VIIh, Thawing Meats and Poultry	5.2	Answers questions correctly on principles and basic methods of preparing different types of foods
5.3	Begin or continue to develop a file of materials on methods of preparing different types of foods by writing to commercial and government sources for free or low-priced bulletins and booklets.	5.3	Develops a resource file on methods of preparing different types of foods.

B6: Demonstrates skill in basic methods of cookery and other processes of food preparation in the production of meals for young children

	Instruction		Assessment
6.1	After viewing each demonstration or film in various processes of food preparation (see Instruction VII B5.1), perform the same operation, explain how to do it, and, if necessary, repeat the operation after correction by the Instructor. Do this on the job during laboratory training sessions.	6.1	Demonstrates skill in all basic processes of food preparation.
6.2	Prepare menu items selected by the Instructor. Explain the techniques you will use before beginning work.	6.2	Prepares basic menu items using correct techniques.
6.3	Prepare a meal for which you have developed the menu and schedule for a child care center. Do this with other staff on the job, or in a foods laboratory.	6.3	Produces meals for a child care center.

B7: Follows established schedule and uses efficient routines in food production

7.1	Look at a written schedule for one day which involves several workers, and/or look at a menu which can be prepared by one person, and tell the Instructor the major steps which each worker must perform, in the order they are to be performed.	7.1	Reads and explains a written schedule for several workers, and/or reads a menu to be prepared by one worker, and explains the sequence of operations.
7.2	Follow a food production schedule which you developed and follow a schedule which someone else developed. Do this on the job or in a foods laboratory as you prepare meals.	7.2	Follows an established food production schedule.
7.3	As you arrange your work and proceed with each task on the schedule, explain to the Instructor why each procedure you are using is the most efficient for the job.	7.3	Uses and explains efficient routines in food production.

COMPETENCY VII C

SERVES FINISHED PRODUCTS OF CONSISTENTLY HIGH QUALITY

C1: Recognizes quality of the finished product

Instruction	Assessment
1.1 Look at examples of standard products prepared by the Instructor or pictures of standard products and analyze the texture, appearance, and flavor which each type of product should have.	1.1 Analyzes key features of standard products of various types of menu items.
1.2 After preparing menu items selected by the Instructor (see Instruction VII B6.1), rate each finished product according to a standard and, if possible, compare with similar finished products prepared by other workers.	1.2 Rates finished products according to key features of a standard, and in comparison to other products of the same type.

C2: Assesses own procedures in food production and modifies if necessary to improve the quality of the finished products

Instruction	Assessment
2.1 After comparing each of your products with a standard product and with similar items prepared by other workers (see VII C1.), discuss ways of improving your procedures if necessary. For example, how would you change the type of shortening, your method of mixing, the type or size of the baking pans, the oven setting or placement of the pans in the oven to improve your biscuits?	2.1 Assesses own procedures in preparing individual menu items in order to improve the finished product.
2.2 Evaluate some of your own procedures in preparing a meal and suggest new routines which would improve the quality of some of the products. For example, which products could be improved by preparing in smaller batches, or by using different equipment?	2.2 Assesses own procedures in preparing a meal and suggests changes to improve the quality of some of the finished products.

STANDARDIZED RECIPES

A. Definition: Standardized Recipe

A standardized recipe is one which has been tried and adapted for use by a given foodservice operation and found to produce the same good results every time when the exact procedures are used with the same equipment, and the same quantity and quality of ingredients.

B. Definition: Tested Quantity Recipe

Tested quantity recipes are available from many sources. Quantity Recipes for Child Care Centers, USDA/FNS-86, were developed in the Child Care Food Program. Regardless of the source, tested quantity recipes must be adapted and standardized for use in a particular situation.

C. Advantages of Standardized Recipes

1. They help increase the acceptability of food served, assure consistency of the product, and establish standards of quality.
2. They help control portions and provide the desired number of servings each time the food is prepared, to prevent left-overs or shortage of items.
3. They help determine amounts and kinds of food to buy (the exact quantities of food to be used are already established).
4. They help control costs by reducing food and labor expenses.
    a. Food cost is reduced because the recipes produce only the amount of food needed, reducing over-production.
    b. Labor cost is reduced because less skilled employees may be hired at less cost. Employees become more efficient in their work habits, which reduces the number of employees needed to produce the same quantity of food.

Handout No. VIIa
(Page 2)

D. Testing and Standardizing Recipes

1. Set up a standard procedure for testing and standardizing recipes so that you can introduce items from parents' recipes and cookbooks. To adapt tested quantity recipes to your situation, start with step 4 on this page.

2. Check the new recipe.

   a. Note the proportions for ingredients and check against standards. In most cases the product will not be a good one if the recipe varies too much from standard proportions.

   b. Check total yield. Add the weights of all ingredients, allow for preparation and cooking loss, and check against the total claimed.

   c. Check number of portions. Divide the total yield by the desired portion size to get the number of portions.

3. Test the new recipe.

   a. Prepare the recipe.

      If it is a quantity recipe, break it down to a small batch. Evaluate the ease of preparation.

   b. Evaluate the product.

      Note and record your observations for flavor, appearance, color, and texture. Determine portion size, number of portions, and total yield.

   c. Ask interested staff and parents to evaluate the product.

      The initial test might be part of a nutrition education activity.

   d. If necessary, make changes and retest.

4. Test for the quantity needed.

   Write the recipe for the amount needed to give the desired number of portions, prepare and evaluate the preparation procedures and the product. Revise if necessary.

5. Prepare final recipe for file.

   a. Recipe card or sheet should show:

      - total yield (weight and/or volume and number of portions) and portion size (weight, size, or liquid volume);
      - list of ingredients in order of preparation;
      - amount of each ingredient by weight and measure;
      - method, or directions, step by step; and
      - variations or substitutions which have been tested.

b. Market order information may be written on recipe card or sheet.

- cost per serving (and date of cost computation) facilitates precosting of menus; and
- buying guide for market sizes/weights of ingredients not in regular stock, and number/weight to order for number of portions needed will make the preparation of the market order easier.

c. Completed recipe should be approved by a nutritionist for determination of its contribution to the required meal pattern.

6. Constantly check your recipes after they go into production. Train the staff to jot down comments and suggestions on the back of the recipe card.

ADJUSTING A RECIPE

To adjust the size of a recipe in Quantity Recipes for Child Care Centers:

- On the front of the recipe card, in the column headed "for________servings," write the number of servings you need.
- Divide the number of servings you need by the number provided by the recipe to obtain a factor.
  EXAMPLE: You need 30 servings
  Recipe is for 50 servings
  30/50 = 6 (the factor)
- Multiply the amount of each ingredient (weight or measure) by the factor to obtain the amount to prepare for the required number of servings; enter this amount in the recipe opposite the ingredient. CAUTION: Some ingredients may not work conveniently with the recipe. Below, you will find that three eggs multiplied by .6 gives 1.8 eggs. Here, you'll want to increase to two eggs. Before beginning, look over the recipe to see if conversion can be done easily.

EXAMPLE: MUFFINS

	50 servings	multiply by	30 servings
All purpose flour	1-1/4 quarts (or 5 cups)	.6	= 3 cups
Non-fat dry milk	1/2 cup (or .5 cup)	.6	= .3 or 1/3 cup
Baking powder	3 Tablespoons	.6	= 1.8 Tablespoons
Sugar	3/4 cup (.75 cup)	.6	= .45 (1/2 cup)
Salt	2 teaspoons	.6	= 1.2 teaspoons
Eggs	3 large	.6	= 1.8 (2) large eggs
Oil	1 cup	.6	= .6 or 2/3 cup
Water	2-1/3 cup (2.33)	.6	= 1.4 cups (1-1/2)

Handout No. VIIc

MEAT COOKERY

A. Cook at low temperatures.

1. Softens connective tissues but does not harden muscle tissue.

2. Produces tender, juicy meats with minimum shrinkage.

B. Use appropriate cooking methdos for various cuts or meat.

1. Dry heat cookery

   a. Meats to be cooked with dry heat

   - Tender cuts and ground beef, such as top round or beef patties.
   - Most cuts of lamb and pork.
   - Frankfurters, and precooked items.

   b. Methods of dry heat cookery for meats

   - Roasting, fat side up in uncovered roasting pan without water.
   - Baking or portioned meats on shallow baking pans which have been covered with a pan coating.
   - Pan broiling on a sizzling hot grill or fry pan and turning at frequent intervals.
   - Saute by frying in a small amount of fat.

   c. Principles of dry heat cookery

   - There is no need to season, as there is slight penetration of flavors.
   - When cooking with a convection oven, lower the temperature in the recipe by 50° F and reduce cooking time by one-third.

2. Moist heat cookery

   a. Meats to be cooked with moist heat

   - Less tender cuts of beef, such as pot roast.
   - Pork and lamb stew meat.

b. Methods of moist heat cookery

- Braising by browning in fat adding moisture if necessary, then covering pan and cooking at low temperature in oven, top of range, or in steam-jacketed kettle.
- Stewing by cutting into small pieces, covering with hot liquid and cooking in covered pan on top of range or in steam-jacketed kettle.

c. Benefits of moist heat cookery

- Less expensive cuts of meat may be used successfully. Some examples are beef chunk, beef rounds, and beef stew.
- Less tender cuts of meat may be made more palatable. Examples are beef brisket and diced beef.
- It offers variety of preparation. For example, beef rounds may be cooked by moist heat or dry heat, resulting in different flavors with the same cut of meat.

C. Use a meat thermometer to determine when meat is done. The internal temperature of the meat should be:

Beef from 160°F for medium to 170°F for well done
Pork 170°F
Lamb from 150°F for medium to 180°F for well done
Veal 170°F

D. Use meat timetables such as Quantity Recipes for Child Care Centers, FNS-86, "Main Dishes", or Handbook of Food Preparation, "Timetable for Roasting Meat at 325°F", p. 74, as a general guide for cooking meat. Timetables are useful in determining when to start cooking meat in order for it to be done when needed. Factors affecting cooking times are weight, bone-in or boneless, amount of fat, degree of doneness desired, initial temperature of the meat, equipment, and air movement.

E. Allow cooked roasts to remain at room temperature twenty to thirty minutes after removal from heat. This allows the gelatin to "set" and makes the roast easier to slice.

PREPARING VEGETABLES AND FRUITS

Fruits and vegetables add color, texture and interest to meals as well as many vitamins, minerals and other nutrients. Served raw as finger foods, vegetables and fruits are enjoyed by children.

A. Vegetables

1. Fresh produce should be cleaned and stored as soon as possible after delivery.

    a. Dirt can be removed from greens by soaking for no more than six minutes in salted water.

    b. Some vegetables (such as cauliflower, broccoli and cabbage) may contain tiny mites which can be removed by soaking in cold, salted water for thirty minutes.

2. Raw vegetables are popular finger foods:

    Coleslaw with apples
    Carrot sticks
    Cauliflower florets
    Celery sticks
    Parsnip wedges
    Rutabaga wedges
    Turnip wedges
    Zucchini rings
    Tomato slices or wedges
    Green pepper strips or rings
    Broccoli spears

3. What are the general principles of cooking vegetables?

    a. Cook vegetables only until they are done. Properly prepared vegetables will enhance acceptance by children.

        - Use a small amount of water and cook in gently boiling water
        - Cook until tender but firm (not soft).
        - Do not overcook: overcooking destroys many valuable nutrients and harms the color, flavor, texture and shape.
        - Schedule vegetable preparation as close to serving time as possible.

    b. Cook vegetables in as large pieces as possible, and cook vegetables such as potatoes and carrots in their skin whenever possible to save nutrients. Care must be taken in removing any vegetable skin. Loss of edible material should be kept to a minimum, since this will increase food costs.

    c. When cooking mild-flavored vegetables on top of the range, cook them in a covered pan. Strong-flavored vegetables such as cabbage and brussels sprouts should be cooked uncovered.

d. Cook vegetables in a steamer whenever possible.

- Use a perforated pan insert to steam fresh and frozen vegetables.
- Vegetables cooked with perforated pan insert should be salted and seasoned after they are cooked.
- Small batch cooking is preferred, as vegetables will always be freshly cooked.

e. The color of green vegetables is affected by long cooking and by minerals and acids (such as vinegar) in the presence of heat. To avoid discoloration, boil vegetables without a cover on the cooking vessel for the first few minutes, then cover.

- Intense heat, acids and minerals turn green vegetables a brownish color.
- Never add baking soda to green vegetables because it causes a loss of nutritive value.

f. Overcooking causes vegetables to lose color, flavor, and nutritive value.

g. White vegetables (such as cauliflower) discolor in vegetable juices; they turn yellow in alkaline or hard water. To maintain the color of white vegetables, cover the cooking vessel.

h. Vegetables do not need to be seasoned for children.

i. Since canned vegetables are fully cooked, only a very short heating time is needed. Schedule the heating of canned vegetables so they will be served soon after they are heated.

j. Frozen vegetables can be cooked without thawing. Use a timetable for boiling or steaming frozen vegetables.

B. Fruits

Most fruits are well accepted by children. Fresh, canned, dried or frozen fruits can be used to meet the vegetable/fruit requirement.

1. Fresh fruits

   - Fresh fruits can be served whole, halved or in pieces.
   - Fresh fruits should be washed thoroughly before using and some (such as peaches and pears) should be dipped in lemon juice after peeling or cutting to prevent them from turning a dark color.

2. Canned fruits can be purchased in various concentrations of syrups. A water pack or light syrup should be used for children.

3. Dried fruits can be served as stewed fruit or in pies, cobblers, crisps, whips and salads.

4. Frozen fruit should be served as soon as it has thawed preferably before all the ice crystals have melted.

Handout No. VIIe

BAKING BREAD AND COOKING GRAINS

Enriched and whole grain breads and cereal products are an important part of every child's diet. These products contribute valuable nutrients (protein, various B vitamins, and iron), variety, taste, and appearance. Whole grain breads and cereals contribute natural fiber as well as nutrients.

A. Yeast Breads

1. Types.
    a. Lean dough: A dough made with little or no sugar and shortening.

        Bread - white, wheat, French
        Rolls - white, brown and serve, hamburger

    b. Sweet dough: A dough made with sugar, shortening and eggs.

        Bread - raisin
        Rolls - caramel, peanut butter

2. Techniques. For best results in bread baking, be sure temperature controls on ovens are accurate. Use standardized recipes, good quality ingredients, and weigh or measure ingredients accurately. Know and use the specific techniques recommended in the recipes:
    a. Punching: A folding of the dough over from the sides into the middle until most of the gas is expelled. This relaxes the gluten and remixes ingredients so yeast obtains new food.
    b. Proofing: The fermentation of the sugar in the dough. The yeast multiply, producing CO_2, which leavens the dough. A temperature of 80° to 85°F and humidity of 75 percent are desirable. When dough has doubled, proofing is complete. Proofing usually requires from 15 to 45 minutes.
    c. Kneading: The mixing of the dough to develop the gluten.
    d. Scale or measure the prepared product into baking pans.
    e. Keep oven temperature constant for the specified baking time. Well-proofed bread should be baked at 400°F for 20 minutes. Rolls should be baked at 400°F for 18 minutes.

Handout No. VIIe

B. Quick Breads (usually leavened with baking powder and/or soda)

1. Types.

   a. Biscuits

      - Rolled and cut
      - Dropped

   b. Muffins - portioned into muffin tins (blueberry, raisin, date)

   c. Loaf breads - portioned into loaf pans (Boston brown, banana, date)

2. Short-cuts

   a. Cut biscuits in squares rather than using a biscuit cutter, which requires rerolling the dough. Several biscuits may be transferred to the baking pan at a time, using a long, wide spatula.

   b. A second method is to roll out biscuit dough in pan and cut it in squares or diamond shapes with dough cutter.

C. Cooking Grain Products

1. Types.

   These include items such as rice, macaroni, noodles, and spaghetti. Cereal products are cooked to increase digestibility and to develop flavor.

2. Techniques.

   a. Cook quickly in boiling water until tender.

   b. A small amount of salad oil added to the water while cooking keeps pastas and rice from sticking together and foaming. At serving time there is no need for additional fat if oil was added to the water.

   c. Drain quickly and stir in fat, if desired.

   d. Avoid overcooking.

   e. Macaroni products should have resistance to the bite. The term used to describe the mouth feeling is "al dente."

   f. Rice should be tender, but not excessively soft.

POULTRY COOKERY

Poultry should be cooked so that the finished product will be juicy, tender, and evenly done to the bone. Cook at low temperature (simmer on top of stove or roast at 325°F in the oven) to soften connective tissues, but not to harden muscle tissue. Stuffing for poultry should be baked separately.

Use a meat thermometer when roasting turkey. Checking the internal temperature of the meat is the only accurate way to determine when the meat is done. Turkey is done when the thermometer reads 180°F in the inner thighs of a whole turkey or 170°F in turkey breasts.

Use timetables as a general guide for cooking poultry, to determine when to start cooking for the scheduled serving time. See Quantity Recipes for Child Care Centers, FNS-86.

Allow roasted turkey to remain at room temperature for twenty to thirty minutes after removal from the heat. This allows the gelatin to "set" and makes the bird easier to slice.

Cooking Methods for Poultry

A. Use dry heat (roasting, baking, or oven frying) for young poultry.

1. Roasting

   a. Whole turkeys, turkey breasts or turkey rolls may be roasted.
   b. Whole chickens, parts, or quarters can be roasted.

2. Baking

   Casserole dishes containing poultry, such as chicken or turkey corn casserole and turkey macaroni casserole, can be baked in the oven.

3. Oven frying

   Brush fat over chicken parts or quarters, place on a greased pan, and bake at 400° F (maximum temperature) for 45 minutes.

4. Cooking with a convection oven

   Reduce oven temperature called for in recipe by 50° F.

B. Use moist heat (braising, steaming, or stewing) for less tender birds.

1. Braising

   a. Few poultry items are prepared by the braising method in Child Nutrition Programs, because young poultry is purchased, and braising is used only for older, tough meat.

   b. Braising temperatures should not exceed 185° F.

2. Steaming.

   a. Poultry for a la king and creamed dishes can be steamed.

   b. The use of the compartment steamer will greatly reduce the cooking time.

3. Stewing.

   a. Poultry can be stewed in compartment steamers or steam-jacketed kettles.

   b. Poultry prepared in this way can be used in stews, a la kings, and curries.

   c. Stewing temperatures should not exceed 185° F.

MEAT AND POULTRY PRODUCTS COMMONLY USED IN CHILD NUTRITION PROGRAMS

A. Ground beef:

1. Grill or ovenfry hamburgers.
2. Sauté ground beef for casseroles, pizza, and sloppy joes.
3. Ovenfry meat balls.

B. Diced beef:

1. Saute to caramelize.
2. Then braise or stew for casseroles.

C. Top round:

1. Roast in 325° F oven until internal temperature is 160° F to 170° F.
2. Use as pot roast by braising until tender.

D. Whole turkey or turkey roast:

1. Roast in 325° F oven until internal temperature is 180° F to 185° F.
2. Steam in compartment steamer until internal temperature is 180° F to 185° F.
3. Braise in a covered pan until internal temperature is 180° F to 185° F.

E. Pork roast:

1. Roast fresh pork in 325° F to an internal temperature of 170° F.
2. Braise to an internal temperature of 170° F.

F. Chicken:

1. Bake quarters in 325° F oven.
2. Ovenfry quarters in 400° F oven.
3. Steam whole in compartment steamer.

4. Stew whole for casseroles. Caution must be exercised in the handling of cooked poultry, because it spoils easily.

   a. Cool 20 to 30 minutes. Slice and serve.

   b. Cool cooked poultry on wire rack until cool enough to handle. Remove meat from bone. Spread pieces of meat in one layer to cool. When cool, wrap meat loosely in wax paper or foil. Store in refrigerator (36° to 40° F).

   c. Use within two days after cooking.

THAWING MEATS AND POULTRY

1. Schedule thawing so that the meat or poultry will be cooked soon after it is thawed.

2. Remove from freezer storage only the amount of meat or poultry needed for one day's use.

3. Remove meat or poultry from the carton and thaw in original wrappings in the refrigerator at 35° to 40°F, or thaw under running cold water. Never use warm or hot water. Do not thaw at room temperature.

4. Space blocks or packages of meat or poultry on refrigerator shelves so that air can circulate around them.

5. Allow one and one-half hours per pound of meat for thawing (or about 18 to 24 hours for thawing 12 or 15-pound blocks of ground beef).

6. Poultry can be partially thawed in the original wrapper in the refrigerator, then removed from the wrapper and placed in cold water until completely thawed.

7. Allow the following thawing times for poultry:

   a. Chicken, whole or cut-up - overnight.

   b. Turkey

      Whole, 18 pounds and over - two to three days
      Whole, under 18 pounds - one to two days
      Parts - about one day
      Breasts - overnight

8. Do not start cooking meat or poultry one day and finish it the next.

9. As soon as possible after meat or poultry is thawed, is should be cooked. Never hold thawed poultry for more than 24 hours. Do not refreeze thawed meat or poultry in the raw state.

APPENDICES

APPENDIX A. FORMS AND INSTRUCTIONS
APPENDIX B. REFERENCES
APPENDIX C. BIBLIOGRAPHY - NUTRITION EDUCATION REFERENCES

APPENDIX A. FORMS

Several sample forms have been designed for use with this training manual. They can be used intact, modified, or not used at all at the discretion of the Instructor.

Accompanying the forms are the stated purposes for which they were designed and instructions for using them. A list of the forms and summaries of their suggested uses is given below.

1. Analysis of the Trainee's Task Performance (Supervisor Assessment) - This form was designed to assess the extent of the sub-competencies as related to the Trainee's job, and at what level. It will also show the supervisor's judgment of the Trainee's aptitude for training if the Trainee is not presently using the competency on the job. It is to be filled out by the Supervisor after the Instructor lists the sub-competencies tentatively selected for the training program.

2. Trainee Job Analysis (Self-Assessment) - The self-assessment by Trainees is to be conducted in conference or group discussion by the Instructor. The Instructor can use one form for each Trainee to record the Trainee's responses to questions about his/her present use of the competencies.

3. Unit Curriculum Evaluation - The Unit Curriculum Evaluation form provides the basis for a formative evaluation of the curriculum by establishing a written unit-by-unit record of activities used for teaching the course and the Instructor's assessment of their value.

4. Printed Resource Review Form - A record of printed matter reviewed can be kept on this form for future course reference or for suggested additional reading for Trainees either during or after the course.

5. Film Review Form - The Film Review Form provides a written record of films reviewed for future course reference. It can also be used to review other visual aids, such as transparencies.

6. Task Analysis Form - The Task Analysis Form is to be used by Trainees in analyzing tasks with the assistance of the Instructor. It can also be used by the Instructor for planning demonstrations of specific tasks.

Name of Trainee: ____________ Program: ____________ Phone: ____________

ANALYSIS OF TASK PERFORMANCE
(Supervisor Assessment)

Directions for Senior Staff Member*

After reading each task carefully, please check (X) appropriate column.

Supervisor: ____________

Date: ____________

DOES THE TRAINEE PERFORM THIS TASK?	and probably never will NO 1	but supervises others who do NO 2	but could after training NO 3	with no supervision YES 4	with limited supervision YES 5	with close supervision YES 6	COMMENT (if necessary)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

To the Instructor: List each subcompetency you have selected for the training sessions beside one of the numbers in the first column. For example, "Plans menus which follow the specified meal pattern." Ask each Trainee's supervisor to place a check in one of the columns on the right to indicate the extent to which the Trainee uses the competency or could after training.

TRAINEE JOB ANALYSIS
(Self-Assessment)

Name of Trainee ______________________________

Program ______________________ **Phone** ______________

To the Instructor: List each subcompetency on which you plan to train under "Behavior": Ex.: "Plans menus which follow the prescribed meal pattern; In conversation with the Trainee ask if he performs that task and place a check in the appropriate column. Rephrase the subcompetency if necessary to be sure the Trainee understands what you mean.

BEHAVIOR	NEVER	SOMETIMES	USUALLY	ALWAYS
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

UNIT CURRICULUM EVALUATION

Purpose

The Unit Curriculum Evaluation form was designed as a tool for conducting a formative evaluation of the course. The formative evaluation is a way of assessing the course teaching methods and continually improving by trying different techniques. The form provides a written record of what works and what does not work.

How to Use the Form

Complete the top portion of the form with the appropriate information. A form should be completed for each of the competency areas whenever the course is taught.

In the left-hand ACTIVITIES column, list the activities that were used to teach the unit. Use the right-hand COMMENTS column to write your evaluation of each activity as it relates to the unit being taught. Comments should consider the following questions:

- Is the activity directly related to the competency area?
- Did the Trainee(s) find the activity interesting?
- Did the assessment criteria for the activity indicate that the Trainee(s) learned from the experience?
- Should the activity be kept, dropped, modified, or put in another unit?
- Can the activity be improved?
- Does the activity appear to be a more valuable learning experience for some Trainees than for others? Explain.

Refer to the Unit Curriculum Evaluation forms from previous courses each time the curriculum for another course is being outlined.

UNIT CURRICULUM EVALUATION

Site: ______________________________ Date: ____________

Number of Trainees: ____________ Instructor: ________________

Competency Area: ______________________________

Activities	Comments

PRINTED RESOURCE REVIEW (PRR) FORM

Purpose

The Printed Resource Review Form provides a handy record for the Instructor on all printed matter reviewed that might be useful in training sessions or as additional resource material for Trainees.

How To Use The Form

Follow the directions printed on the form for reviewing printed matter. After the material is located, reviewed, and the form is completed, there are several methods for filing the form that may be used. The form can be filed alphabetically by:

- the first letter of the subject with the appropriate training unit or in a separate file;
- the first letter of the last name of the major author with the appropriate training unit or in a separate file; or
- cross-indexed by subject and author in a master file by filing the forms by author, then establishing a subject index on 3 x 5 cards with the subject at the top of the card and the author and title in the center of the card; cards are filed by subject.

PRINTED RESOURCE REVIEW (PRR) FORM

Directions to Instructor

Listed below is the source of information on the subject of: ______________________________

When you locate this printed item, complete the top half of the form and make note of where you found the item (personal copy, name of specific library, etc.). The call number would also facilitate your quick return to the publication if/when necessary. As you review the item, add your notes in outline form to the bottom half and reverse side of this page.

Author ______________________________ Date of Publication ________________

Last First

Title ______________________________ Brief Title ____________

Publisher ____________________________ Cost ________________

(if Journal, Volume: No.)

Location Call No. Annotation

Page No.) Instructor/Reviewer's Notes:

HOW TO USE
FILM REVIEW FORM

Purpose

The purpose of the Film Review Form is to provide a permanent record for referral on films for the Instructor. The completed forms will tell the Instructor at a glance the cost, if any, of the film and an evaluation of its contents to aid in the selection of training materials.

How to Review a Film

Whenever a film is available, review it before it is shown in class. Equipment and supplies that are needed are the film, a projector, a screen and the Film Review Form.

Procedures	Explanations and Suggestions
1. Review Film Review Form	1A. To know what type of information you must look for and record on the form.
	1B. Complete the form in pencil so that recorded data can be refined each time the film is reviewed.
	1C. Description(s) of films may be clipped from catalogs or periodicals and attached to the reverse side of Film Review Forms.
2. View film for the first time.	2A. Overview the film as one would overview the chapter of a book.
	2B. Take brief notes (time-consuming details may distract you from the film).
3. Discuss film with other reviewers.	3A. Often different people "see" different things.
	3B. Discuss film while instructor/ operator rewinds film.
4. View the film for the second time.	4A. Concentrate on ideas for using the film. Answer the question: "With whom and in what way might I use the film for educational/ training purposes?"

Film Review Form (Cont'd.)

Procedures	Evaluations and Suggestions
	4B. Concentrate on discussion questions such as the kind of questions that can be raised before and after the film is shown in order to make it more valuable to the viewers. Write questions, answers, and discussion topics on the Film Review Form.
5. Staple multiple reviews of the same film together.	
6. File the completed Film Review Form(s) with the appropriate course/lesson plan.	6A. Many Instructors find it convenient to organize materials related to a course/unit/module/lesson in a three-ring binder.
7. File the completed Film Review Form(s) in alphabetical order.	7A. Two possible filing methods are: • a three-ring binder with alphabetical index that is conveniently portable, or • a drawer file with alphabetical dividers.
	7B. Underscore or circle the first letter of the film title if completed forms are to be filed in alphabetical order.

FILM REVIEW FORM

Instructions: Complete top part of page 1 before viewing the film, and balance of the form after reviewing the film.

Circle one: 8mm Film 16mm Film 35mm Film Strip or Slides Transparency
Circle Color B&W Sound Silent

Title: Time (Minutes):

Produced by: Date Produced:

Borrow from:

Rent from:

Purchase from:

Content:	Strengths	Weaknesses

Ideas for Using Film:

Film Review Form (Cont'd.)

Discussion Questions/Answers:

Related Information:

Reviewed by: ______________________ Date ____________

TASK ANALYSIS

(Use additional pages if necessary to complete analysis)

Task______________________________Frequency:_______________

Analysis done by:____________________Date:_______________

Equipment/Supplies Needed:________________________________

____

STEP		OPERATIONS		
Number	What ?	How?	Why?	When?
1.				
2.				
3.				
4.				
5.				
6.				

APPENDIX B. REFERENCES

Resource materials in this reference section are listed by type and source for convenience in ordering.

Items listed in the competency area units can be found in this section beside the reference number.

GOVERNMENT PUBLICATIONS

U.S. Department of Health, Education and Welfare, Office of Human Development Services, Administration for Children, Youth & Families, P.O. Box 1182, Washington, D.C. 20013

1. Handbook for Local Head Start Nutrition Specialists, June 1975.
2. Nutrition - Better Eating for a Head Start.
3. Nutrition Education for Young Children, DHEW Publication No. (OHDS)76-31015.
4. Nutrition Training Guide for Classroom Personnel in Head Start Programs, DHEW/OHD/OCD, 1976.
5. Head Start Performance Standards

U.S. Department of Health, Education and Welfare, Public Health Service, Food & Drug Administration, Division of Retail Food Production, Washington, D.C. 20204

6. The Food Service Sanitation Manual, 1976, DHEW Publication No. (FDA)78-2081.

U.S. Department of Health, Education and Welfare, Public Health Service, Health Services and Mental Administration, Maternal and Child Health Service, Rockville, Maryland

7. Nutrition and Feeding of Infants and Children under Three in Group Day Care, 1977, DHEW Publication No. (HSM)72-5606.

U.S. Government Printing Office, Washington, D.C. 20402

8. Granger, Richard H., Your Child from One to Six, DHEW Publication No. (OHDS)77-30026.

Child Care and Summer Program Division, USDA Food and Nutrition Service, Washington, D.C. 20250

9. A Guide for Precosting Food for School Food Service, Program Aid No. 1185, June 1977.
10. Planning Guide for Food Service in Child Care Centers - FNS-64, 1976.

11. Child Care Food Program Claim Forms and Supporting Documentation*.

12. Child Care Food Program Regulations, Part 222, 7CFR.

13. Food Buying Guide for Child Care Centers - FNS-108, February 1977.

14. Food Purchasing Pointers for School Food Service, Program Aid No. 1160, August 1977.

15. Food Storage Guide for Schools and Institutions, Program Aid No. 403, November 1975.

16. Publications of the Food and Nutrition Service (list of those available.)

17. Quantity Recipes for Child Care Centers, FNS-86.

U.S. Department of Agriculture, Office of Governmental and Public Affairs, Washington, D.C. 20250

18. How to Buy Series, Agriculture Marketing Service, Home & Garden Bulletin No.'s:

    141 - Fresh Fruits
    143 - Fresh Vegetables
    144 - Eggs
    145 - Beef Steaks
    146 - Beef Roasts
    157 - Poultry
    166 - Meat for Your Freezer
    167 - Canned and Frozen Vegetables
    177 - Dry Beans, Peas, and Lentils
    191 - Canned and Frozen Fruits
    193 - Cheese
    195 - Lamb
    198 - Potatoes
    201 - Dairy Products

Consumer Affairs, National Marine Fishery Service, Washington, D.C. 20235

19. Federal Inspection Marks for Fishery Products, Food Fish Facts No. 50, NOAA - U.S. Department of Commerce.

20. Cope, Gene, Fishery Inspection: Taking the Fishiness Out of Fish, Fishery Product Inspection and Safety Division, NOAA.

21. Look for These Marks of Quality (Poster), NOAA.

22. Dougherty, Jack B., Institutional Purchasing Specification for the Purchasing of Fresh, Frozen. and Canned Fishery Products (Circular), NOAA.

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*State Agency or USDA Regional Office:
Obtain forms from the agency administering the program. These agencies change from time to time.

GOVERNMENT PUBLICATIONS (Con't)

23. Seafood Heritage: From America's First Industry, NOAA.

24. Sea Food - The Marks of the U.S. Department of Commerce Inspection (Poster).

25. U.S. Grade Standards for Fishery Products, Food Fish Facts No. 51, NOAA.

26. U.S. Grade Standards for Fishery Products, Food Fish Facts No. 51, NOAA.

27. Vitalize Your Life, Discover Seafood - Your Guide to Nutrition from the Sea, NOAA.

PROFESSIONAL AND TRADE PUBLICATIONS

Metropolitan Life Insurance Company, Health and Welfare Division, One Madison Avenue, New York, New York 10010

28. "Looking for Health".

American Dietetic Association, 620 North Michigan Avenue, Chicago, Illinois 60611

29. Standardizing Recipes for Institutional Use

National Restaurant Association, Chicago, Illinois

30. A Self-Inspection Program for Foodservice Operations on Sanitation and Safe Food Handling, 1973.

American Home Economics Association, 2010 Massachusetts Avenue, NW, Washington, D.C. 20036

31. Handbook of Food Preparation, 7th edition, 1975.

AUDIOVISUAL MATERIALS

(Borrowed from the Food and Nutrition Information and Educational Materials Center, National Agricultural Library, U.S. Department of Agriculture, Beltsville, Maryland 20705)

32. Clean Dishes, National Sanitation Foundation, Educational Services, Ann Arbor, Michigan, (Slides), FNIC No. 2088-74/140 slides, TX 657.D6C5.

33. Cold Food Handing, FNIC, and Comprenetics, distributed by ROCOM, Division of Hoffman - La Roche, Inc., (Loop), FNIC No. 704-13/ Super 8 mm/15 min./1970, TX 601.C6

34. Eye of the Supervisor, National Education Media, Inc., 1576 Venture Blvd., Encino, California 91436, (Loop), FNIC No. 813-73/8mm/12 min./ 1972, FH 5549.E92 F&N AV; (Film), FNIC No. 814-73/16mm/12 min./1972, HF 5549.E9 F&N AV.

35. Fast Sandwich Making, National Educational Media, Inc., 1576 Venture Blvd., Encino, California 91436, (Film), FNIC No. 3671-73/16 mm/10 min./1970, TX 818.F32

36. Feeding Your Young Children, Chicago, National Dairy Council, (Filmstrip), FNIC 715-75/35 mm/60 frames/1973, TX 361.C5F4.

37. Foodborne Illness: Cause and Prevention, Classroom World Production, Inc., Raleigh, N.C., (Slides), or Food Service Guide, P.O. Box 709, Rocky Mount, N.C. 27801, (Slides), FNIC No. 1714-73/2"x2" and phonotapes/12 cassettes, RA 642.F6.

38. Four Food Group Transparencies, Chicago, National Dairy Council, (4 transparencies), FNIC No. 718-75, TX 355.F66.

39. Interpreting a Recipe, Shirley Ringold, 3M Visual Products Division, St. Paul, Minnesota Mining & Manufacturing Company, (Transparencies), FNIC No. 2148-73/23 transparencies/1968, TX 715.I5.

40. Jenny Is a Good Thing, U.S. HEW, Administration for Children, Youth, and Families, Office of Human Development Services, Washington, D.C., Modern Talking Pictures Service Film Libraries, [and] Foods and Nutrition Information and Educational Materials Center, National Agricultural Library, Rm. 304, Beltsville, Maryland 20705, (Film), FNIC No. 4007-73/16 mm/18 min./1969.

41. Kitchen Safety: Preventing Burns, National Education Media, Inc., (Loop), FNIC No. 1733-73/8 mm/10 min./1969, RA 440.5K55 F&NAV. (Film), FNIC No. 1734-73/16mm, RA 440.5.K5.

42. Kitchen Safety: Preventing Cuts and Strains, National Education Media, Inc., (Loop), FNIC No. 1735-73/8mm/10 min./1969, RA 440.5.K57. (Film), FNIC No. 1736-73, RA 440.5.K52.

43. Kitchen Safety: Preventing Falls, National Education Media, Inc., (Film), FNIC No. 1737-73/16 mm/10 min./1967, RA 440.5.K53.

44. Kitchen Safety: Preventing Fires, National Education Media, Inc., (Loop), FNIC No. 1738-73/8 mm/10 min., TH 9446.G7K5.

45. Kitchen Safety: Preventing Machine Injuries, National Education Media, Inc., (Loop), FNIC No. 1739-73/8 mm, RA 440.5.K56. (Film), FNIC No. 1740-73/16 mm, RA 440.5.K54.

46. Lift with Your Head, Close Productions, Inc., Ft. Myers, Florida, (Filmstrip), FNIC No. 3782-73/35 mm, T55.3.L5C5.

47. Menu Planning for Child Care Programs, Dawn D. Treadwell; Ithaca, New York; Cornell University; Department of Human Nutrition and Food, (Slides), FNIC No. 3623-73/2 sets of 36 slides/Feb. 1973, TX 739.M4.

AUDIOVISUAL MATERIALS (Con't)

48. Methods of Meat Cookery, Educational Concepts, Inc., 6440 Flying Cloud Drive, Eden Prairie, Minnesota 55343 or Marriot Training Consultants, Washington, Marriott Training Consultants, (Filmstrip), FNIC No. 1957-74/35 mm/14 min., TX 749.M42.

49. Mr. Dish Machine Operator, National Educational Media, Inc. Hollywood, California, (Loop), FNIC No. 1749-73/8 mm/10 min./1969, RA 565.D53; (Loop, Spanish), FNIC No. 1750/73/8 mm/10 min./1969, RA 565.D52; (Film), FNIC No. 1751-73/16 mm/10 min./1969, RA 565.D5.

50. Protecting The Public, National Restaurants Association, Chicago, Illinois, (3 Films), FNIC No. 2086-74/35 mm/1969, RA 565.D7,
Part I: The Personal Side
Part II: Food Protection
Part III: Establishment and Equipment Sanitation

51. Sanitary Storage and Collection of Refuse, U.S. Public Health Service, (Film), FNIC 1767-73/16 mm/19 min./1952, RA 565.S326.

52. Sanitation: Rodent and Insect Control, FNIC; or National Education Media, Inc., (Loop), FNIC No. 1770-73/8 mm/10 min., RA 566.S3; (Film), FNIC No. 1050-76/16 mm/10 min., RA 566.S3MP.

53. Sanitation: Rules Make Sense, FNIC; National Agric. Library, Rm. 304, Beltsville, Maryland 20705 or National Educational Media, Inc., Hollywood, California, (Film), FNIC No. 1772-73/16 mm/10 min./1968, RA 565.S3.

54. Sanitation: Why All The Fuss? Foods and Nutrition Information and Educational Materials Center, National Agricultural Library, Rm. 304, Beltsville, Maryland 20705 or National Educational Media, Inc., Hollywood, California, (Loop), FNIC No. 1773-73/8 mm/10 min./1968, RA 565.S33; (Film), FNIC No. 1774-73/16 mm/10 min./1968, RA 565.S32.

55. Serving Food, HEW, U.S. Public Health Service, FNIC, (Motion Picture), FNIC No. 1775-73/16 mm/11 min./1954, RA 565.S4.

56. The Training Memorandum, National Education Media, Inc., 1576 Venture Blvd., Encino, California 91436, (Loop), FNIC No. 3206-73/8 mm/10 min./1973, HF 5549.T72; (Film), FNIC No. 3207-73/16 mm/12 min./1973, HF 5549.T7.

57. Three Meals a Day, FNIC; or New England State Educational Council, Inc., Cambridge, WGBH TV Station, (Film), FNIC No. 748-74/16 mm/30 min./1973, TX 364.U59 No. 5.

58. Washing-Up: Parts I & II, J. Lyons and Company, (Slides), FNIC No. 1786-73/Part I, RA 642.W3; FNIC No. 1787-73/Part II, RA 642.W32.

59. Work Smart - Stay Safe, National Restaurant Association, Chicago. Illinois, (Filmstrip/Record), FNIC No. 1788-73/35 mm/12 min./1969, RA 440.5W6.

BOOKS

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BOOKS (Con't)

77. Thorner, M. and P. Manning, Quality Control in Food Service, Westport, Connecticut: The Avi Publishing Co., Inc., 1976.

78. Van Egmond, D., School Foodservice, Westport, Connecticut: The Avi Publishing Co., Inc., 1974.

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Public Health Service, HSA/BCHS/DHEW, 5600 Fishers Lane,
Rockville, Maryland 20857.

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APPENDIX C

BIBLIOGRAPHY - NUTRITION EDUCATION RESOURCES

Film Catalogs

Cornell University Film Library
(Low cost films on many topics including consumerism and foods/nutrition)

Write: Cornell University Film Catalog
Film Library
31 Roberts Hall
Cornell University
Ithaca, New York 14850

Modern Talking Picture Service
(Free loan films on many topics including consumerism and foods/nutrition)

Write: Film Scheduling Center
2323 New Hyde Park Road
New Hyde Park, New York 11040

Trade Sources of Nutrition Education Materials (for low cost or free materials)

Cereal Institute, Inc.
1111 Plaza Drive
Schaumburg, Illinois 60195

Cling Peach Advisory Board
Regional Promotion Office
7777 Lake Street, Room 113
River Forest, Illinois 60305

Green Giant Company
Home Services Department
Hazeltine Gates
Chaska, Minnesota 55318

Kraft Foods
Educational Materials Catalog
Educational Department E
P.O. Box 4611
Chicago, Illinois 60677

National Dairy Council
Nutrition Education Materials Catalog
6300 North River Road
Rosemont, Illinois 60018

National Livestock and Meat Board
Educational Publications and Audio Visual Aids Catalog
444 North Michigan Avenue
Chicago, Illinois 60611

Sears, Roebuck and Co.
Catalog of Learning Aids
Consumer Information Services - Dept. 703
Sears Tower
Chicago, Illinois 60684

Other Catalogs

Home Economics Catalog
Social Studies School Service
Dept. 98
10,000 Culver Blvd.
Culver City, California 90230

Scholastic K-12 Instructional Materials Catalog
Scholastic Book Services
904 Sylvan Avenue
Englewood Cliffs, New Jersey 07632

Society for Nutrition Education
Nutrition Education Resource Lists
2140 Shattuck Avenue
Suite 1110
Berkeley, California 94704

Audio-Visual Nutrition Educational Materials

3 M Education Press
3 M Center, St. Paul, Minnesota 55101

School Health Education Study. Curriculum Development Project
Teacher/Student Resources and Transparencies for
Concept 10: Food Selection and Eating Patterns are
Determined by Physical, Social, Economic and
Cultural Factors, 1972.

Food and Nutrition Information and Educational
Materials Center (FNIC)
U.S. Department of Agriculture
National Agricultural Library
Beltsville, Maryland 20705
(audio-visual and complete materials catalogs)

National Dairy Council
6300 North River Road
Rosemont, Illinois 60018

F609 Feeding Your Young Children
35mm color filmstrip, 60 frames, teacher/
leader guide $5.

B012A Food Models
146 full-color photographic, life size models $5.50/set.

F505 Guide to Good Eating
5 joined panels, 421/2x22 in appetizing photographs of four food groups.

D707 Four Group Transparencies

Short, Sarah H., Ph.D., R.D., Innovative Teaching of Nutrition
A.D.A. Study Kit No. SKI
The American Dietetic Association
430 North Michigan Avenue
Chicago, Illinois 60611

Sweetheart Cup Corporation
10100 Reisterstown Road
Owings Mills, Maryland 21117
Funday Foods for Home and School, a program for total nutrition education grades K-6. (Notebook of ideas, recipes, posters, etc. that ties together home, school, children, parents, faculty and the community and involves them all in nutrition education)

Tupperware Home Parties
Educational Services Dept.
Orlando, Florida 32802

Filmstrip Kits:
- Keeping Food Fit: Storing and Freezing
- Food For Life: The Basic Four
- Food To Grow On: Nutrition from Newborn Through Teens
- Planning to Eat?: A Guide To Saving Time, Money and Energy

Walt Disney Educational Media Company
500 South Buena Vista Street
Burbank, California 91521

Foods, Fads and Fallacies

Good Sense/Good Food
(Two sound filmstrip collections to increase your students "Food-Sense" and help them develop good eating habits)

Other: Printed

Katz, Deborah and Goodwin, Mary T.,
Food: Where Nutrition, Politics and Culture Meet, an activities guide for teachers, 1976.
Distributed by: Center for Science in the Public Interest
1755 S. Street, N.W.
Washington, D.C. 20009